

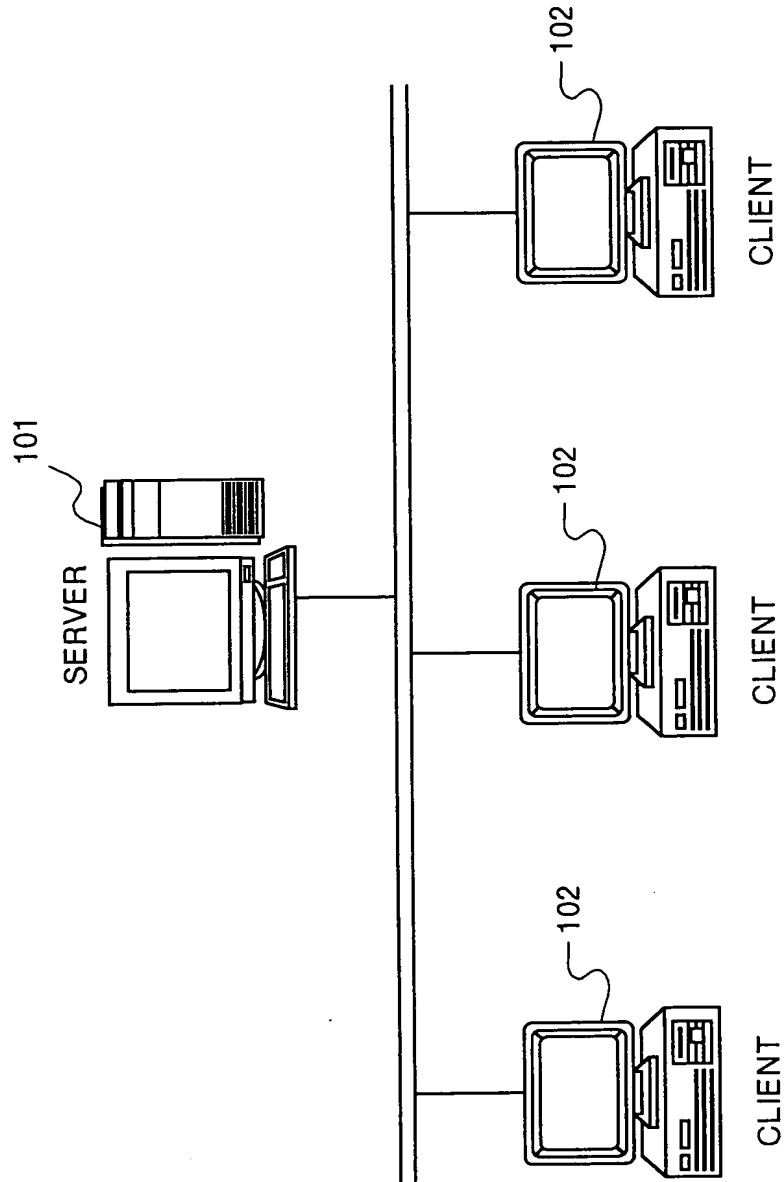
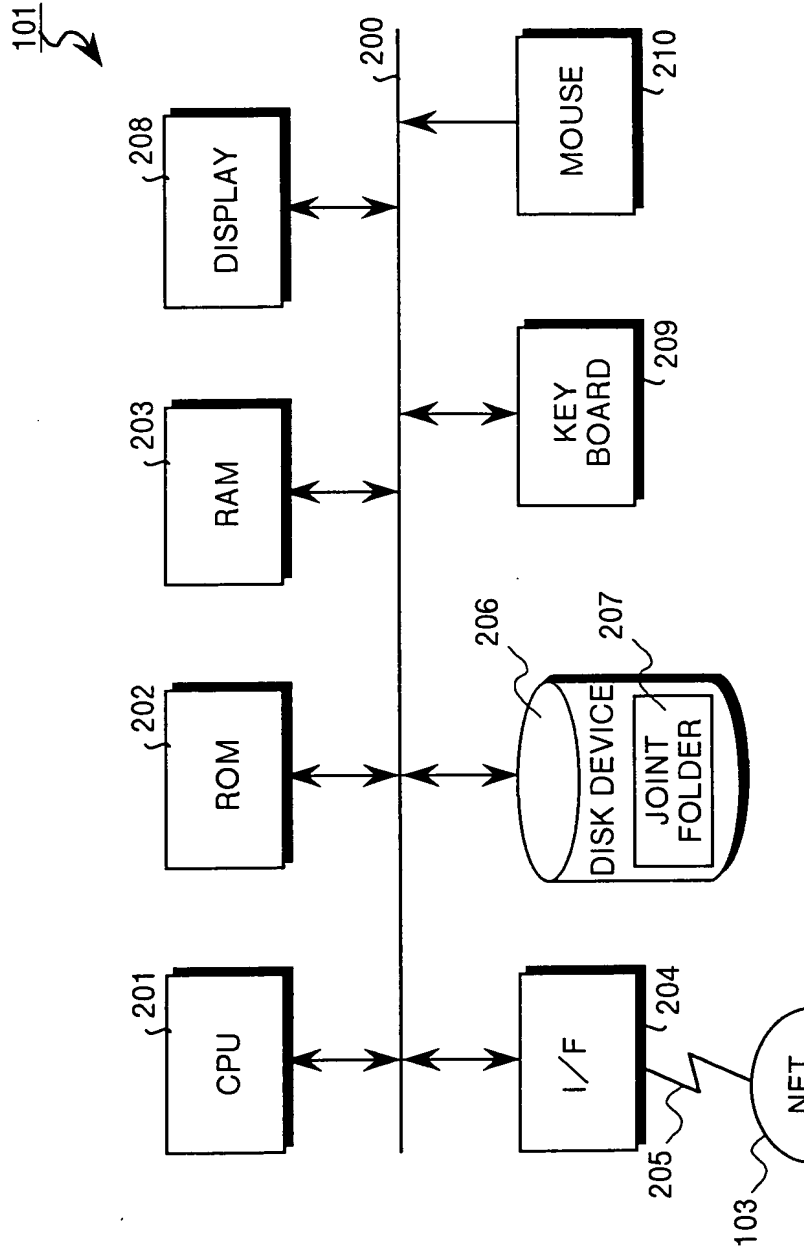
[illegible]

FIG. 2



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FIG. 3

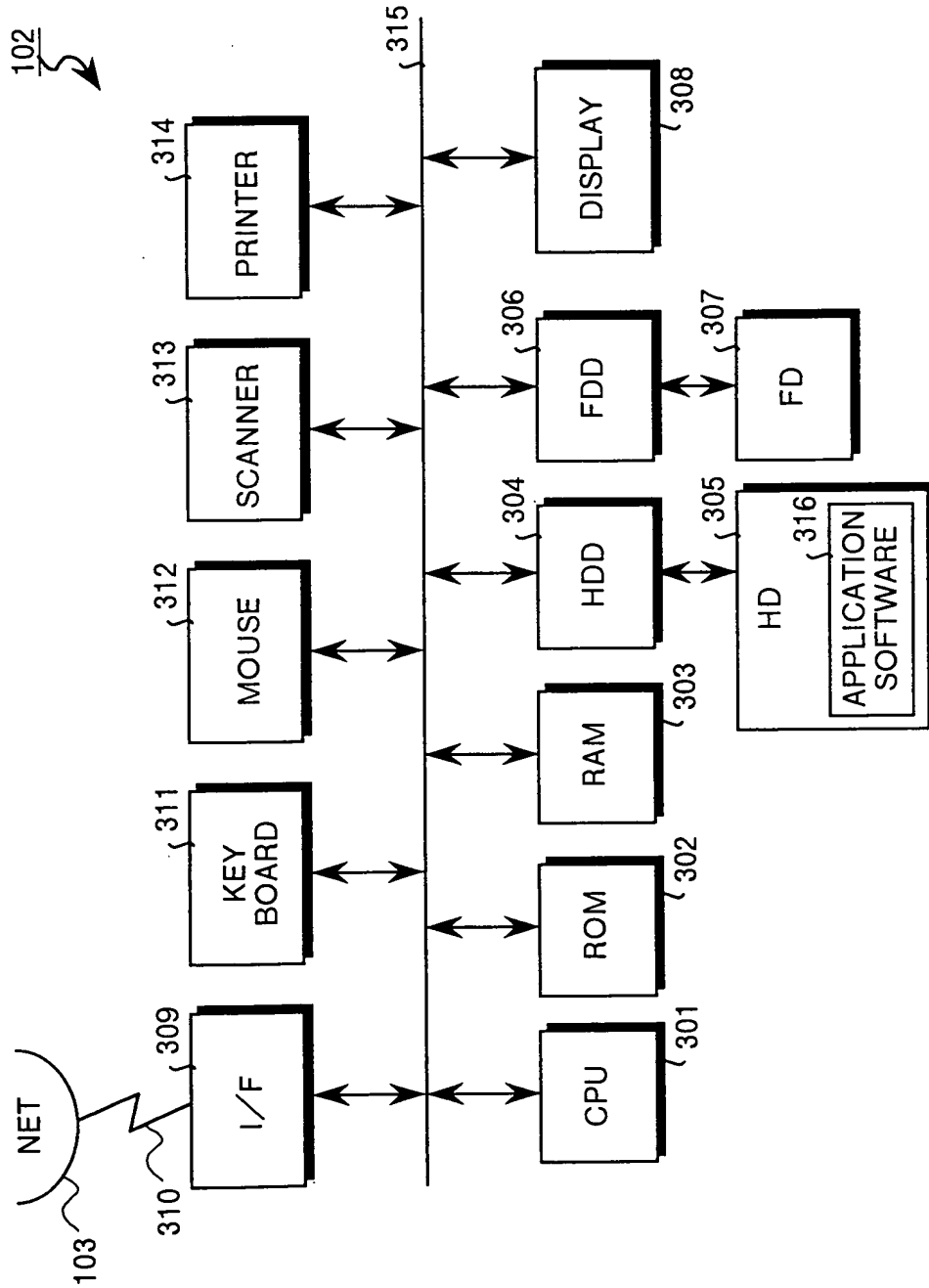
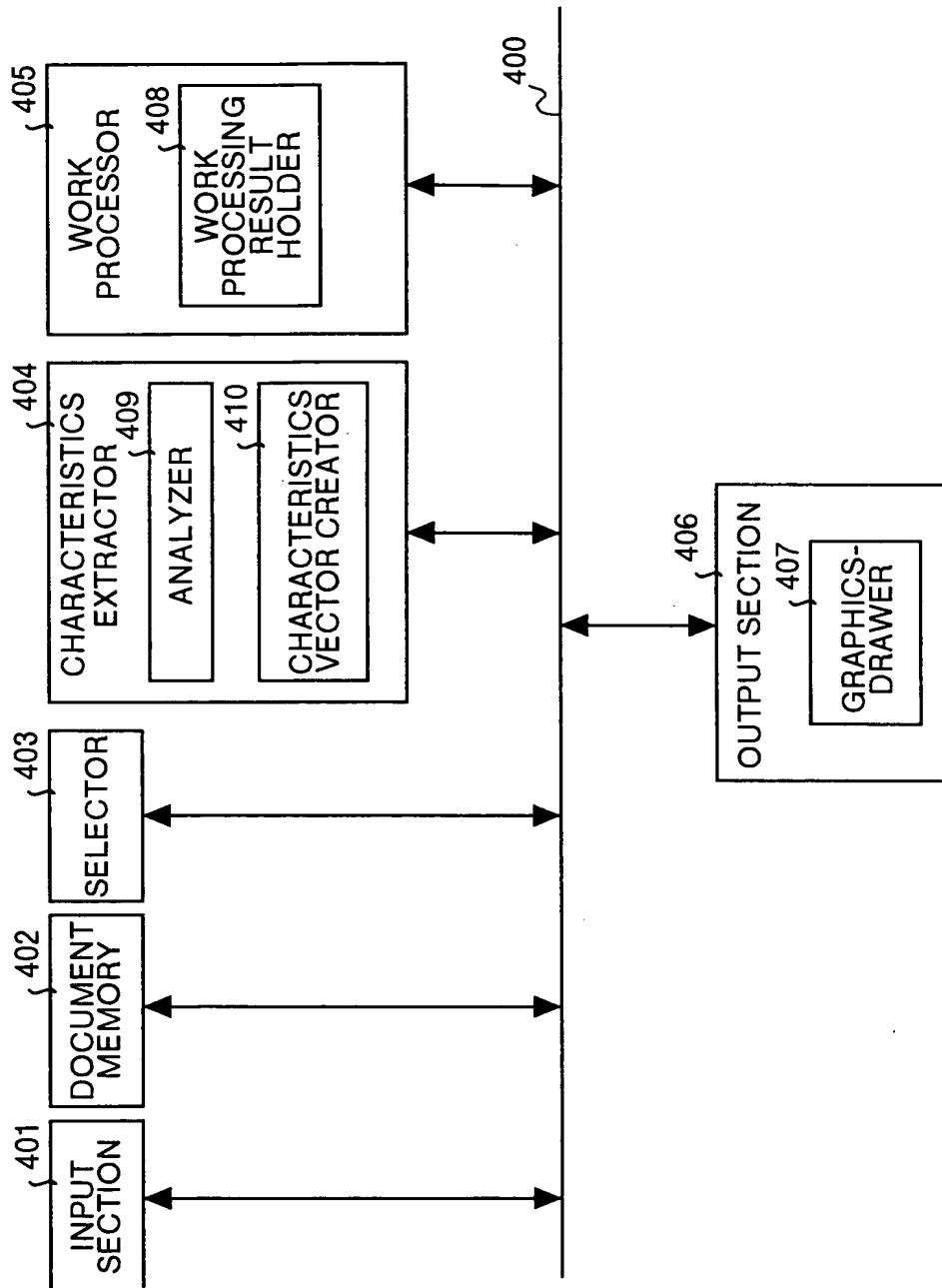


FIG.4



66222 6162260

FIG.5

ITEM NAME	ITEM VALUE
APPLICATION NO.	JAPANESE PATENT APPLICATION LAID-OPEN NO. 10-00000
DATE OF APPLICATION	JANUARY 1, 1998
NUMBER OF CLAIMS	3
NAME OF INVENTION	IMAGE CREATING DEVICE
ADVANTAGES	THE IMAGE CREATING DEVICE OF THE PRESENT INVENTION COMPRISES...

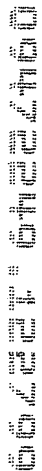
[illegible]

FIG. 7

	CELL POINTER ATTRIBUTE TO CELL VALUE CONTENTS						
	{ 701		{ 702				
NO.1000	2	3000	2	3018		2	3327
NO.1100	1	3421	1	3512	..	1	3698
					.		
					.		
					.		
NO.1500	0	0	0	0	..	0	0

FIG.8

801	802	803	804	805	806
NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS
5	1997/3/5	FUKUOKA	KLM1200	1992	HEATER DOES NOT FUNCTION
6	1997/3/5	NOBORIBETSU	DEF1600	1994	LARGE NOISE POLLUTION
7	1997/3/5	NAGANO	DEF1600	1996	ENGINE WILL NOT START
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS
9	1997/3/6	TAKAMATSU	XYZ3000	1992	BATTERY IS DEAD
10	1997/3/6	NAGASAKI	KLM1200	1993	ENGINE WILL NOT START
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK
12	1997/3/6	NAGANO	DEF1600	1997	RADIO DOES NOT WORK
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION

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FIG.9

NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK
53	1997/4/21	NAGANO	ABC1600	1993	OIL LEAKS
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING
18	1997/3/10	OSAKA	ABC1800	1994	BATTERY IS DEAD
28	1997/3/12	HIROSHIMA	ABC1800	1995	EXHAUST IS BLACK
35	1997/3/17	YOKOHAMA	ABC1800	1996	LARGE NOISE POLLUTION
39	1997/3/20	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
42	1997/3/22	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
46	1997/3/24	TOYAMA	ABC1800	1997	ENGINE WILL NOT START
47	1997/3/24	OSAKA	ABC1800	1994	BATTERY IS DEAD
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS

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FIG.10

NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK
53	1997/4/21	NAGANO	ABC1600	1993	OIL LEAKS
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING
18	1997/3/10	OSAKA	ABC1800	1994	BATTERY IS DEAD
28	1997/3/12	HIROSHIMA	ABC1800	1995	EXHAUST IS BLACK
35	1997/3/17	YOKOHAMA	ABC1800	1996	LARGE NOISE POLLUTION
39	1997/3/20	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
42	1997/3/22	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
46	1997/3/24	TOYAMA	ABC1800	1997	ENGINE WILL NOT START
47	1997/3/24	OSAKA	ABC1800	1994	BATTERY IS DEAD
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS

FIG.11

	CONTENTS OF EXTRACTION PROCESSING
1	WORDS IN LETTER ROW
2	NUMBER OF WORDS IN LETTER ROW
3	NUMBER OF LETTER OF WORDS IN LETTER ROW
4	NUMBER OF TIMES WORDS IN LETTER ROW APPEAR
5	PARTS OF SPEECH OF WORDS IN LETTER ROW
6	DATA REPRESENTING RELATIONSHIP BETWEEN WORDS IN LETTER ROW
7	NUMBER OF SENTENCES IN LETTER ROW
8	NUMBER OF LETTERS IN SENTENCES IN LETTER ROW
9	NUMBER OF CLAUSES OF SENTENCES IN LETTER ROW
10	RELATIONSHIP BETWEEN SENTENCES IN LETTER ROW
::	::

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FIG.12

	CONTENTS OF WORK PROCESSING
1	CLASSIFICATION
2	RETRIEVAL
3	REARRANGEMENT
4	EXTRACT REPRESENTATIVE VALUE
5	EXTRACT MAXIMUM VALUE
6	EXTRACT MINIMUM VALUE
7	CALCULATION
:	:

00222: 01002220

FIG. 13

[illegible]

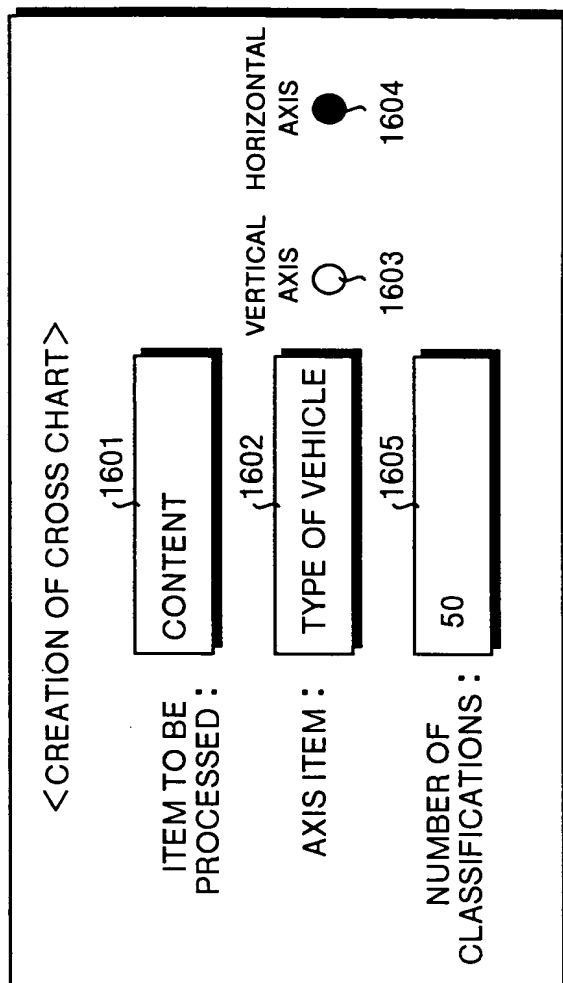
WORD	WORD ID
NOISE POLLUTION	1
IS	2
LARGE	3
PAINT	4
COLOR	5
CHANGE	6
OVERHEAT	7
OCCURS	8
PEELING	9
BATTERY	10
DEAD	11
EXHAUST	12
BLACK	13

FIG.15

1501					A	
NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS	CLUSTER NUMBER
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION	5
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK	1
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR	7
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS	11
5	1997/3/5	FUKUOKA	KLM1200	1992	HEATER DOES NOT FUNCTION	2
6	1997/3/5	NOBORIBETSU	DEF1600	1994	LARGE NOISE POLLUTION	5
7	1997/3/5	NAGANO	DEF1600	1996	ENGINE WILL NOT START	8
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS	14
9	1997/3/6	TAKAMATSU	XYZ3000	1992	BATTERY IS DEAD	12
10	1997/3/6	NAGASAKI	KLM1200	1993	ENGINE WILL NOT START	8
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK	1
12	1997/3/6	NAGANO	DEF1600	1997	RADIO DOES NOT WORK	6
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING	7
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION	2

FIG.16

1600



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FIG.17

1700
↘

TYPE OF VEHICLE

	ABC1600	ABC1800	ABC2000	DEF1600	KLM1200	XYZ3000	TOTAL
CLUSTER 1	3	0	4	1	1	0	9
CLUSTER 2	0	0	2	0	0	23	25
CLUSTER 3	5	3	2	7	0	4	21
CLUSTER 4	7	6	7	0	0	1	21
.....
TOTAL	227	135	87	194	134	281	1058

FIG.18

TYPE OF VEHICLE					1800				1700	
	ABC1600	ABC1800	ABC2000	DEF1600	KLM1200	XYZ3000	TOTAL			
CLUSTER 1	3	0	4	1	1	0	9			
				0	0	23	25			
				7	0	4	21			
				0	0	1	21			
						
				194	134	281	1058			

NUMBER OF DATA : 4

DISPLAY ITEM : CONTENTS

CELL : ABC2000-CLUSTER 1

EXHAUST IS BLACK

EXHAUST IS BLACK

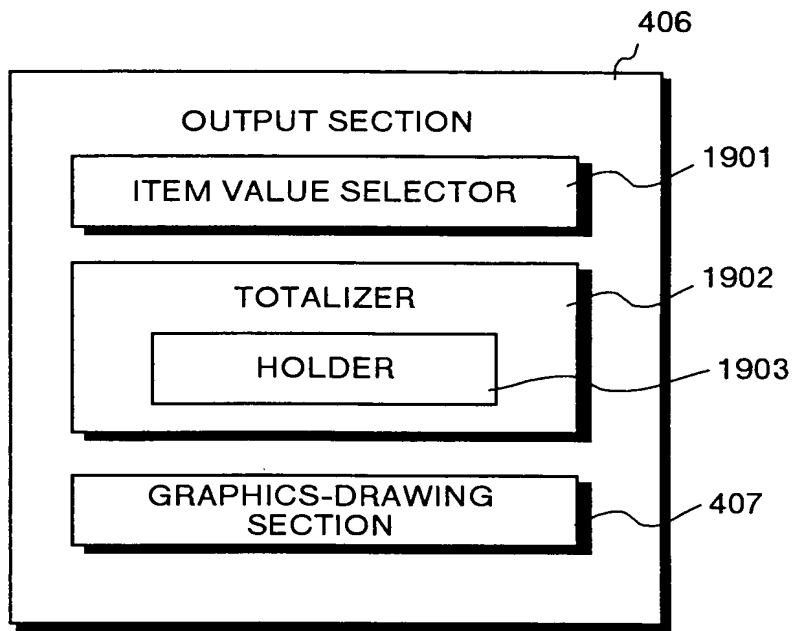
EXHAUST IS BLACK

EXHAUST IS BLACK

1801

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FIG.19



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FIG.20

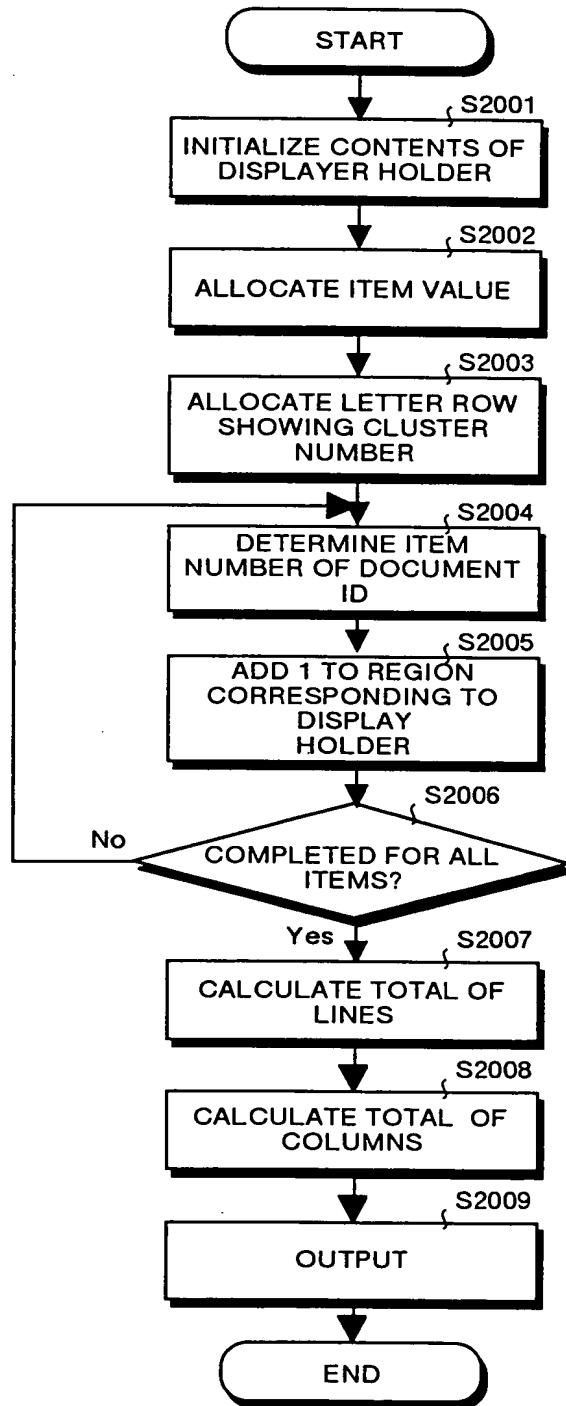


FIG.21

2101

NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS	CLUSTER NUMBER
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION	5
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK	1
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR	7
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS	11
5	1997/3/5	FUKUOKA	KLM1200	1992	HEATER DOES NOT FUNCTION	2
6	1997/3/5	NOBORIBETSU	DEF1600	1994	LARGE NOISE POLLUTION	6
7	1997/3/5	NAGANO	DEF1600	1996	ENGINE WILL NOT START	8
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS	14
9	1997/3/6	TAKAMATSU	XYZ3000	1992	BATTERY IS DEAD	12
10	1997/3/6	NAGASAKI	KLM1200	1993	ENGINE WILL NOT START	8
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK	1
12	1997/3/6	NAGANO	DEF1600	1997	RADIO DOES NOT WORK	6
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING	7
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION	2

FIG.22

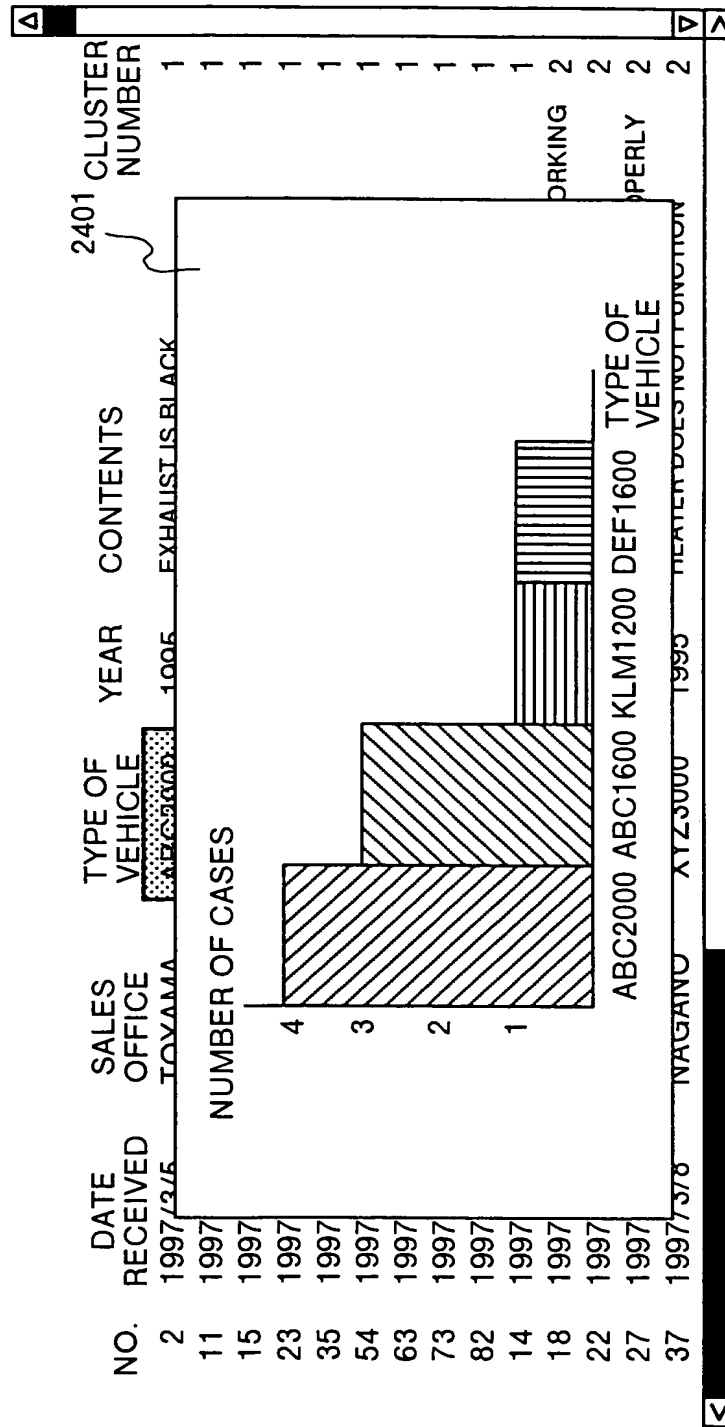
NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS	CLUSTER NUMBER
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK	1
11	1997/3/6	YOKYO	ABC1600	1994	EXHAUST IS BLACK	1
15	1997/3/7	SAPPORO	ABC2000	1996	EXHAUST IS BLACK	1
23	1997/3/7	FUKUOKA	ABC2000	1995	EXHAUST IS BLACK	1
35	1997/3/8	NAGANO	KLM1200	1992	EXHAUST STINKS	1
54	1997/3/10	TOKYO	ABC1600	1994	EXHAUST IS BLACK	1
63	1997/3/12	NAGANO	ABC2000	1996	EXHAUST IS BLACK	1
73	1997/3/14	TOKYO	DEF1600	1997	EXHAUST SMELLS	1
82	1997/3/14	FUKUOKA	ABC1600	1992	EXHAUST IS BLACK	1
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION	1
18	1997/3/7	NAGANO	XYZ3000	1997	COLD DUE TO HEATER NOT WORKING	2
22	1997/3/7	NAGANO	XYZ3000	1997	HEATER DOES NOT FUNCTION	2
27	1997/3/8	SENDAI	XYZ3000	1995	HEATER DOES NOT WORK PROPERLY	2
37	1997/3/8	NAGANO	XYZ3000	1995	HEATER DOES NOT FUNCTION	2

FIG.23

2301

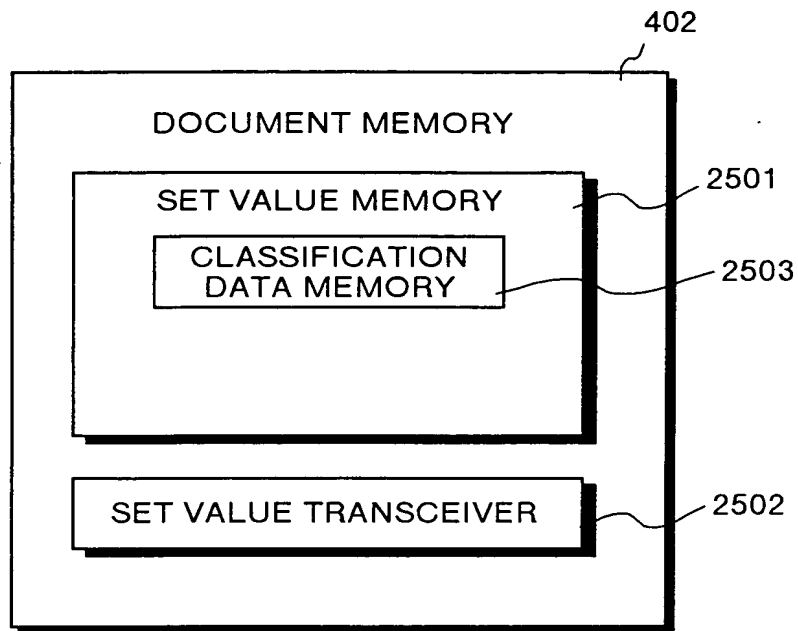
NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS	CLUSTER NUMBER
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK	1
11	1997/3/6	YOKYO	ABC1600	1994	EXHAUST IS BLACK	1
15	1997/3/7	SAPPORO	ABC2000	1996	EXHAUST IS BLACK	1
23	1997/3/7	FUKUOKA	ABC2000	1995	EXHAUST IS BLACK	1
35	1997/3/8	NAGANO	KLM1200	1992	EXHAUST STINKS	1
54	1997/3/10	TOKYO	ABC1600	1994	EXHAUST IS BLACK	1
63	1997/3/12	NAGANO	ABC2000	1996	EXHAUST IS BLACK	1
73	1997/3/14	TOKYO	DEF1600	1997	EXHAUST SMELLS	1
82	1997/3/14	FUKUOKA	ABC1600	1992	EXHAUST IS BLACK	1
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION	1
18	1997/3/7	NAGANO	XYZ3000	1997	COLD DUE TO HEATER NOT WORKING	2
22	1997/3/7	NAGANO	XYZ3000	1997	HEATER DOES NOT FUNCTION	2
27	1997/3/8	SENDAI	XYZ3000	1995	HEATER DOES NOT WORK PROPERLY	2
37	1997/3/8	NAGANO	XYZ3000	1995	HEATER DOES NOT FUNCTION	2

FIG.24



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FIG.25



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FIG. 26

2605

2603

2602

2604

2601

FILE	EDIT	CLASSIFICATION	DATE RECEIVED	SALES	TYPE OF VEHICLE	YEAR	CONTENTS
11			1997/3			1994	EXHAUST IS BLACK
53			1997/4			1993	OIL LEAKS
1			1997/3			1993	LARGE NOISE POLLUTION
3			1997/3			1996	VEHICLE PAINT CHANGES COLOR
8			1997/3			1997	OVERHEAT OCCURS
13			1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING
18			1997/3/10	OSAKA	ABC1800	1994	BATTERY IS DEAD
28			1997/3/12	HIROSHIMA	ABC1800	1995	EXHAUST IS BLACK
35			1997/3/17	YOKOHAMA	ABC1800	1996	LARGE NOISE POLLUTION
39			1997/3/20	AICHI	ABC1800	1993	LARGE NOISE POLLUTION
42			1997/3/22	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR
46			1997/3/24	TOYAMA	ABC1800	1997	ENGINE WILL NOT START
47			1997/3/24	OSAKA	ABC1800	1994	BATTERY IS DEAD
4			1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS

PLEASE INPUT NUMBER OF CLASSIFICATIONS : 50

NUMBER OF CLASSIFICATIONS : 50

FIG.27

2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		2743		2744		2745		2746		2747		2748		2749		2750		2751		2752		2753		2754		2755		2756		2757		2758		2759		2760		2761		2762		2763		2764		2765		2766		2767		2768		2769		2770		2771		2772		2773		2774		2775		2776		2777		2778		2779		2780		2781		2782		2783		2784		2785		2786		2787		2788		2789		2790		2791		2792		2793		2794		2795		2796		2797		2798		2799		2800		2801		2802		2803		2804		2805		2806		2807		2808		2809		2810		2811		2812		2813		2814		2815		2816		2817		2818		2819		2820		2821		2822		2823		2824		2825		2826		2827		2828		2829		2830		2831		2832		2833		2834		2835		2836		2837		2838		2839		2840		2841		2842		2843		2844		2845		2846		2847		2848		2849		2850		2851		2852		2853		2854		2855		2856		2857		2858		2859		2860		2861		2862		2863		2864		2865		2866		2867		2868		2869		2870		2871		2872		2873		2874		2875		2876		2877		2878		2879		2880		2881		2882		2883		2884		2885		2886		2887		2888		2889		2890		2891		2892		2893		2894		2895		2896		2897		2898		2899		2900		2901		2902		2903		2904		2905		2906		2907		2908		2909		2910		2911		2912		2913		2914		2915		2916		2917		2918		2919		2920		2921		2922		2923		2924		2925		2926		2927		2928		2929		2930		2931		2932		2933		2934		2935		2936		2937		2938		2939		2940		2941		2942		2943		2944		2945		2946		2947		2948		2949		2950		2951		2952		2953		2954		2955		2956		2957		2958		2959		2960		2961		2962		2963		2964		2965		2966		2967		2968		2969		2970		2971		2972		2973		2974		2975		2976		2977		2978		2979		2980		2981		2982		2983		2984		2985		2986		2987		2988		2989		2990		2991		2992		2993		2994		2995		2996		2997		2998		2999		3000		3001		3002		3003		3004		3005		3006		3007		3008		3009		3010		3011		3012		3013		3014		3015		3016		3017		3018		3019		3020		3021		3022		3023		3024		3025		3026		3027		3028		3029		3030		3031		3032		3033		3034		3035		3036		3037		3038		3039		3040		3041		3042		3043		3044		3045		3046		3047		3048		3049		3050		3051		3052		3053		3054		3055		3056		3057		3058		3059		3060		3061		3062		3063		3064		3065		3066		3067		3068		3069		3070		3071		3072		3073		3074		3075		3076		3077		3078		3079		3080		3081		3082		3083		3084		3085		3086		3087		3088		3089		3090		3091		3092		3093		3094		3095		3096		3097		3098		3099		3100		3101		3102		3103		3104		3105		3106		3107		3108		3109		3110		3111		3112		3113		3114		3115		3116		3117		3118		3119		3120		3121		3122		3123		3124		3125		3126		3127		3128		3129		3130		3131		3132		3133		3134		3135		3136		3137		3138		3139		3140		3141		3142		3143		3144		3145		3146		3147		3148		3149		3150		3151		3152		3153		3154		3155	
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FIG.28

NO.	DATE RECEIVED	SALES OFFICE	TYPE OF VEHICLE	YEAR	CONTENTS	CLUSTER NUMBER
1	1997/3/5	AICHI	ABC1800	1993	LARGE NOISE POLLUTION	5
2	1997/3/5	TOYAMA	ABC2000	1995	EXHAUST IS BLACK	1
3	1997/3/5	TOKYO	ABC1800	1996	VEHICLE PAINT CHANGES COLOR	7
4	1997/3/5	SAPPORO	DEF1600	1995	OIL LEAKS	11
5	1997/3/5	FUKUOKA	KLM1200	1992	HEATER DOES NOT FUNCTION	2
6	1997/3/5	NOBORIBETSU	DEF1600	1994	LARGE NOISE POLLUTION	5
7	1997/3/5	NAGANO	DEF1600	1996	ENGINE WILL NOT START	8
8	1997/3/5	TOKYO	ABC1800	1997	OVERHEAT OCCURS	14
9	1997/3/6	TAKAMATSU	XYZ3000	1992	BATTERY IS DEAD	12
10	1997/3/6	NAGASAKI	KLM1200	1993	ENGINE WILL NOT START	8
11	1997/3/6	OSAKA	ABC1600	1994	EXHAUST IS BLACK	1
12	1997/3/6	NAGANO	DEF1600	1997	RADIO DOES NOT WORK	6
13	1997/3/6	MORIOKA	ABC1800	1996	PAINT IS PEELING	7
14	1997/3/6	SENDAI	XYZ3000	1995	HEATER DOES NOT FUNCTION	2

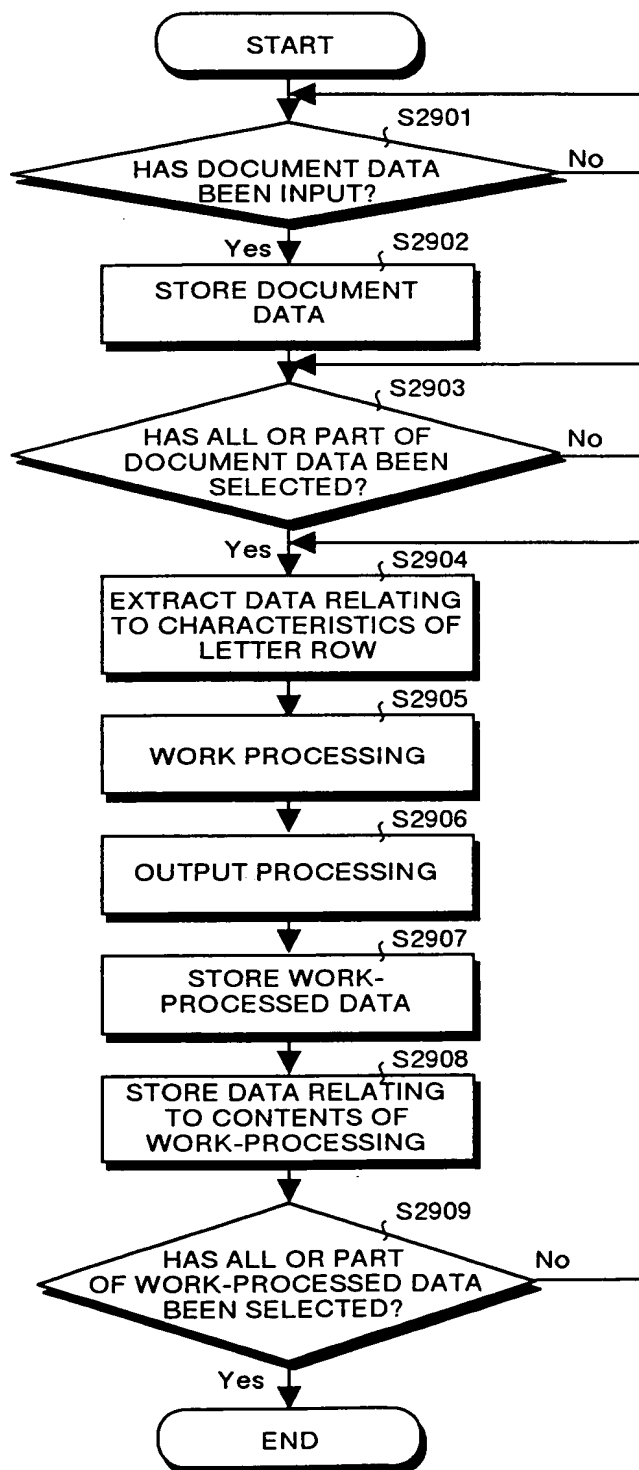
2801

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NUMBER OF CLASSIFICATIONS : 30
CLASSIFICATION SPEECH PARTS : NOUNS

CLASSIFICATION RESULT 1	CLASSIFICATION RESULT 2
<	>

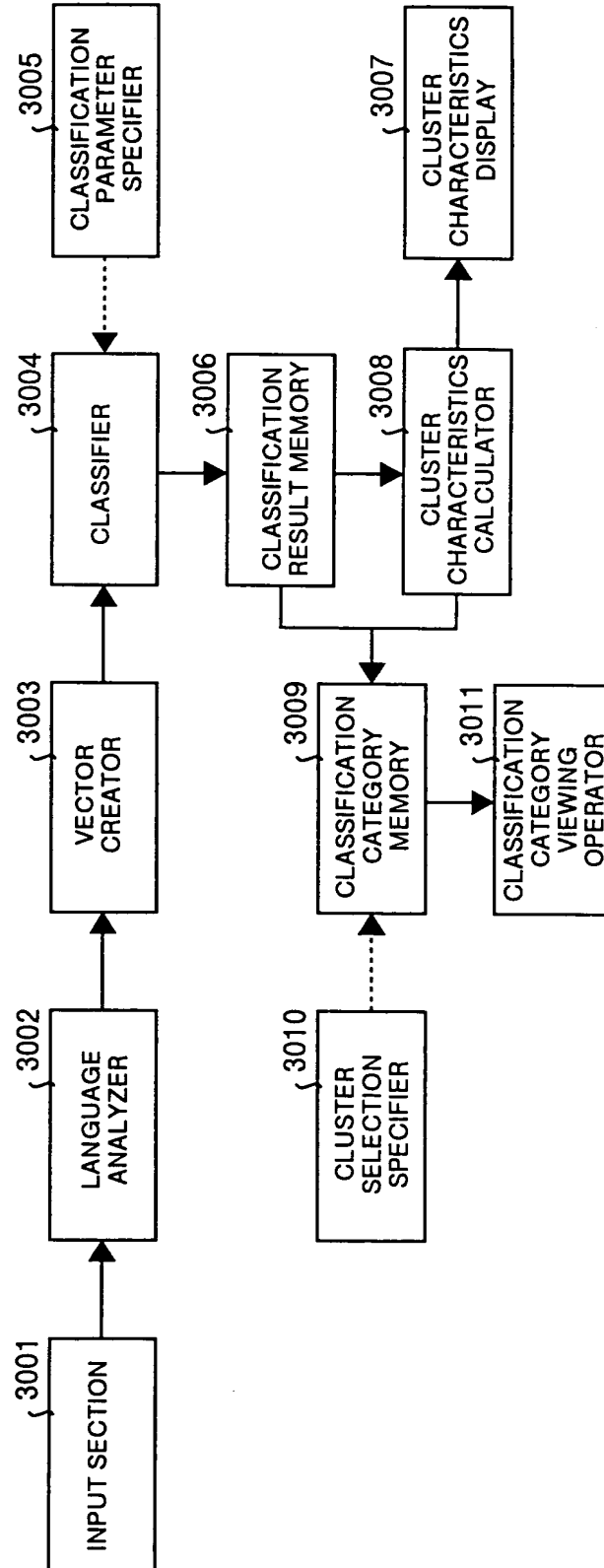
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FIG.29



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FIG.30



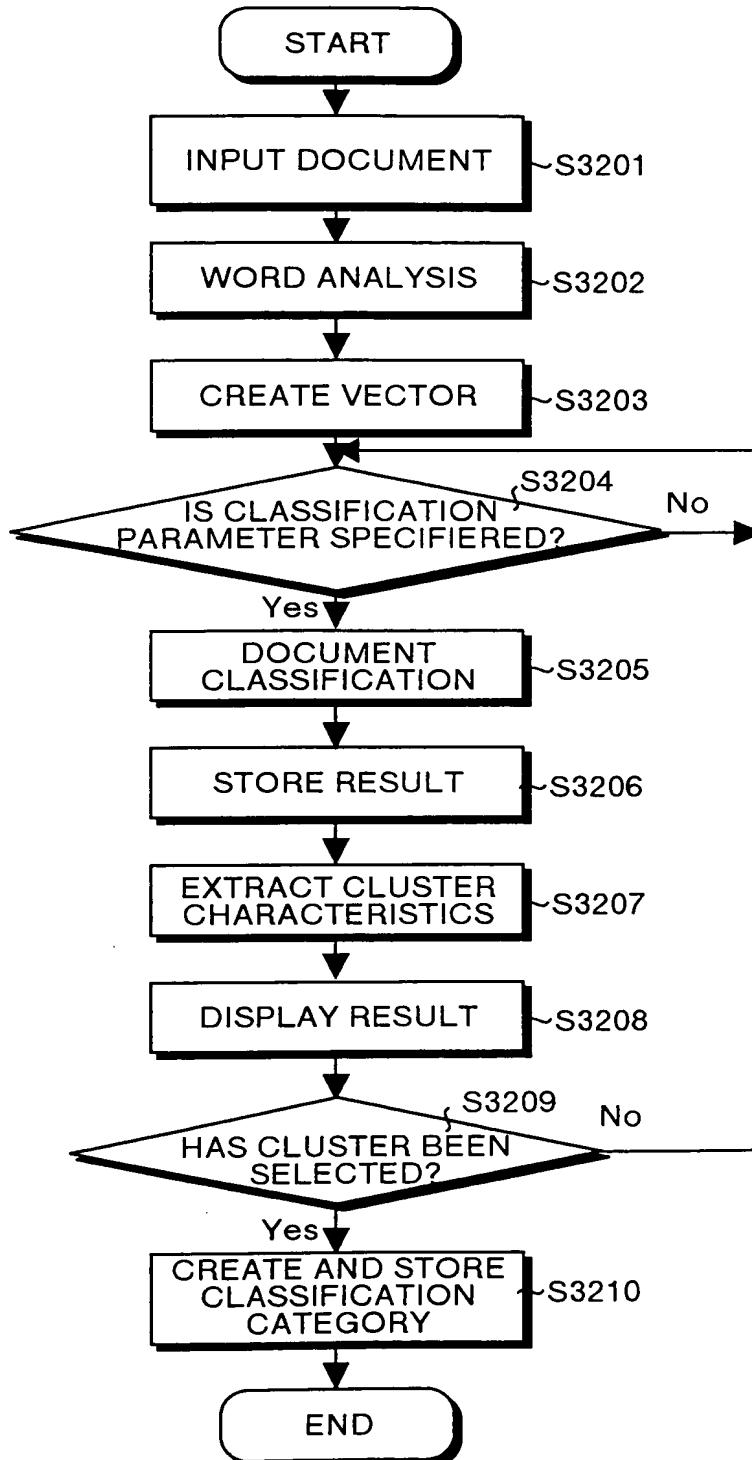
31/56

FIG.31

3101		3102	3103	3104	3105
CLUSTER ID	NUMBER OF MEMBERS	WORDS OF HIGH INCIDENCE	DOCUMENT CONTENTS	DEGREE OF RESEMBLANCE TO CENTER	
1	248	MANAGER, BUSY,...	MUCH SYSTEM MANAGEMENT WORK AND VERY BUSY	0.987	
			BUSY SYSTEM MANAGEMENT AND COSTS CANNOT BE REDUCED	0.965	
			WHEN MANAGER IS BUSY, SYSTEM BREAKS DOWN	0.911	
			MANAGEMENT DIFFICULT DUE TO SYSTEM BREAKDOWN	0.889	
			MANAGEMENT OFFICE IS BUSY DUE TO SYSTEM BREAKDOWN	0.876	
3110					
N	1498	OPERABILITY, POOR,....	SOFTWARE HAS POOR OPERABILITY	0.969	
			DIFFICULT TO REMEMBER SOFTWARE OPERABILITY	0.962	

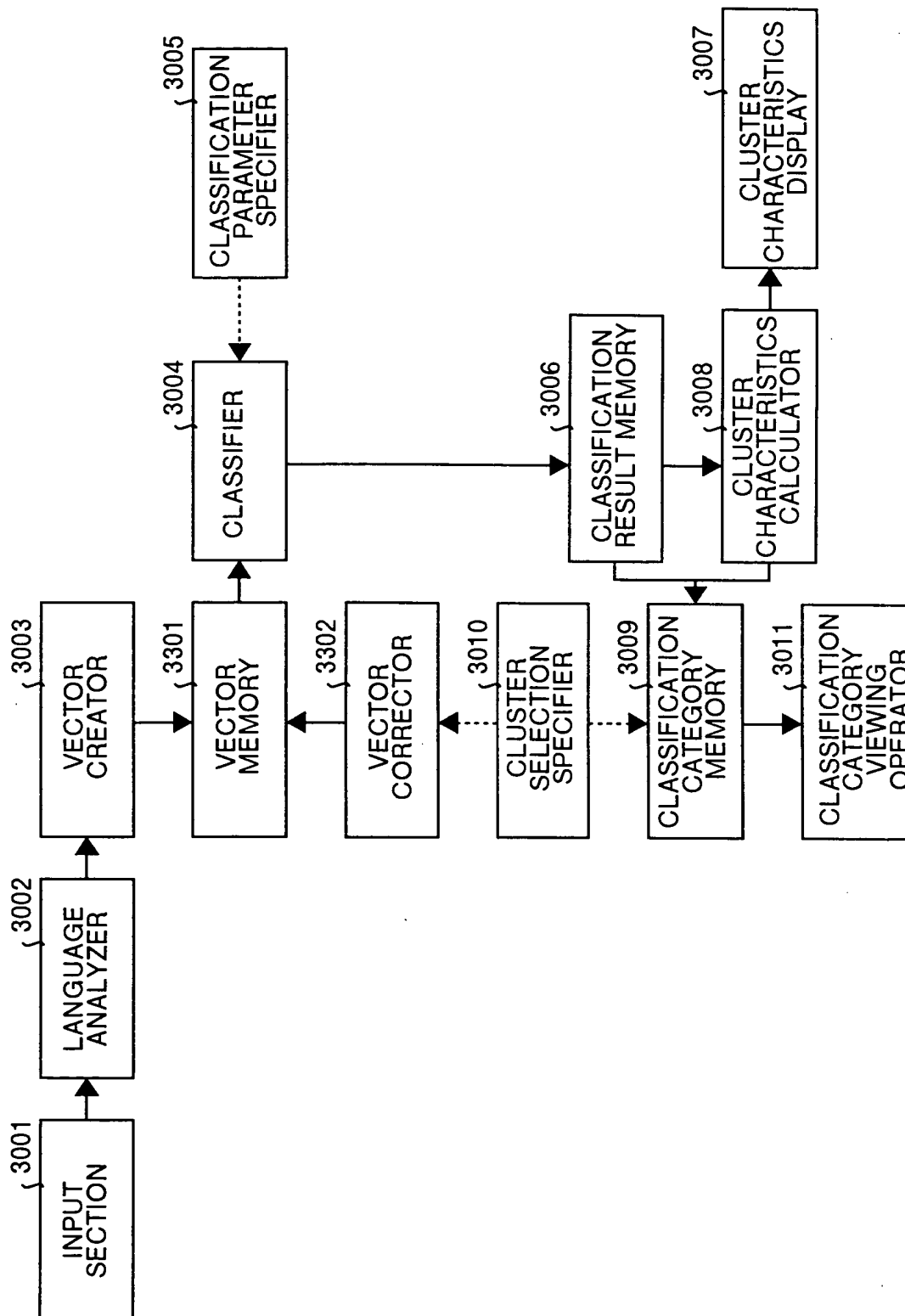
32/56

FIG.32



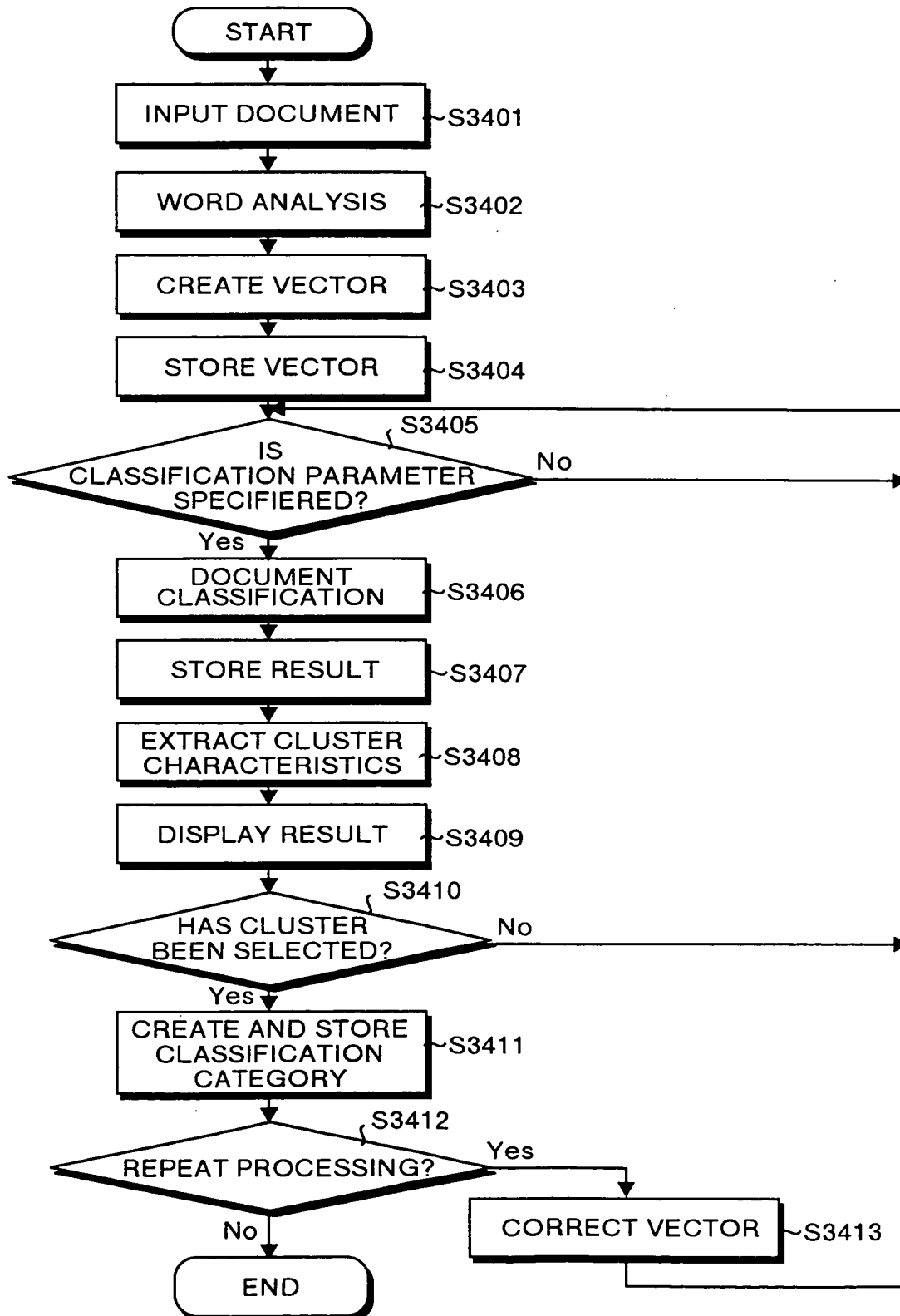
33/56

FIG.33



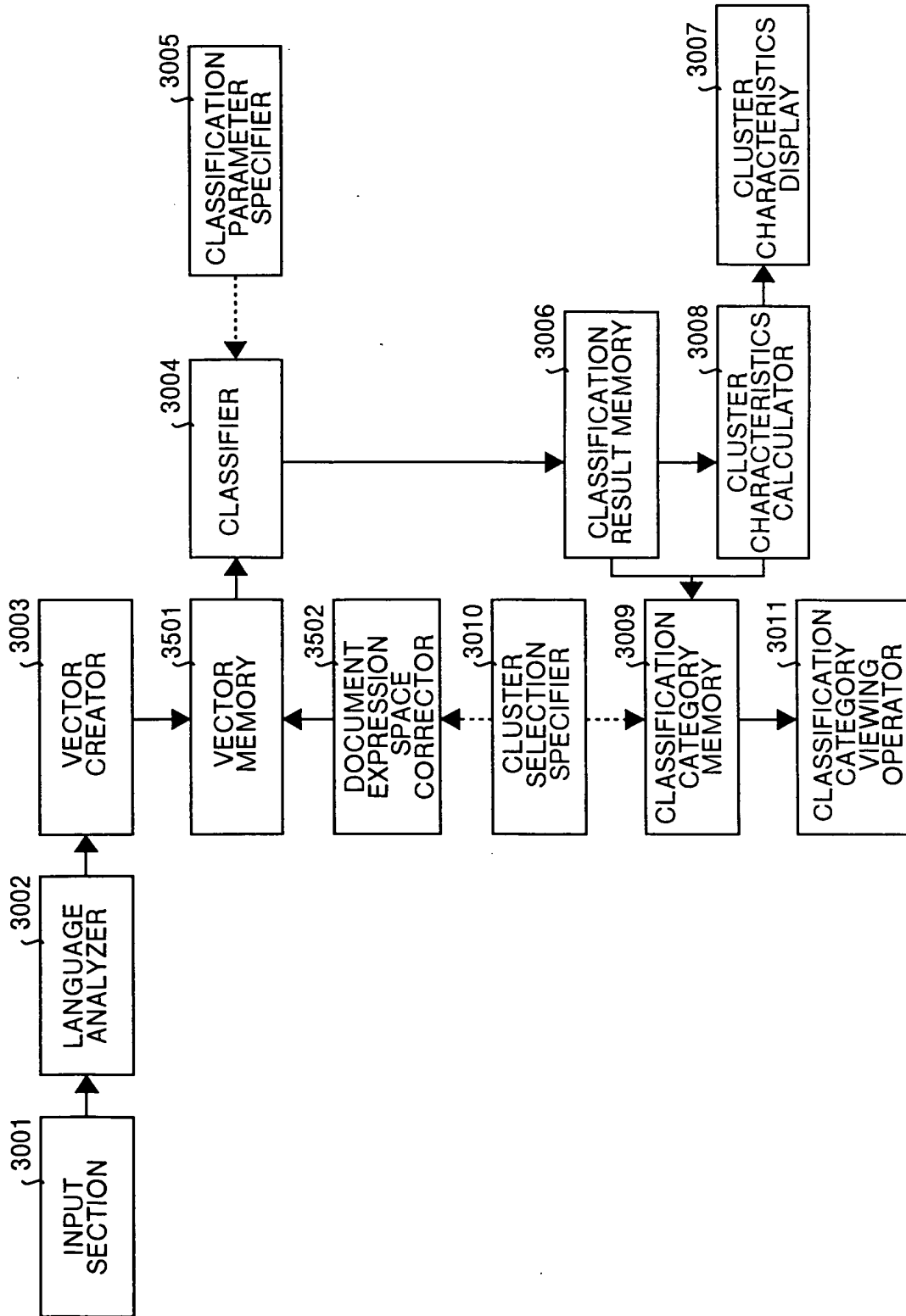
34/56

FIG.34



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FIG.35



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FIG.36

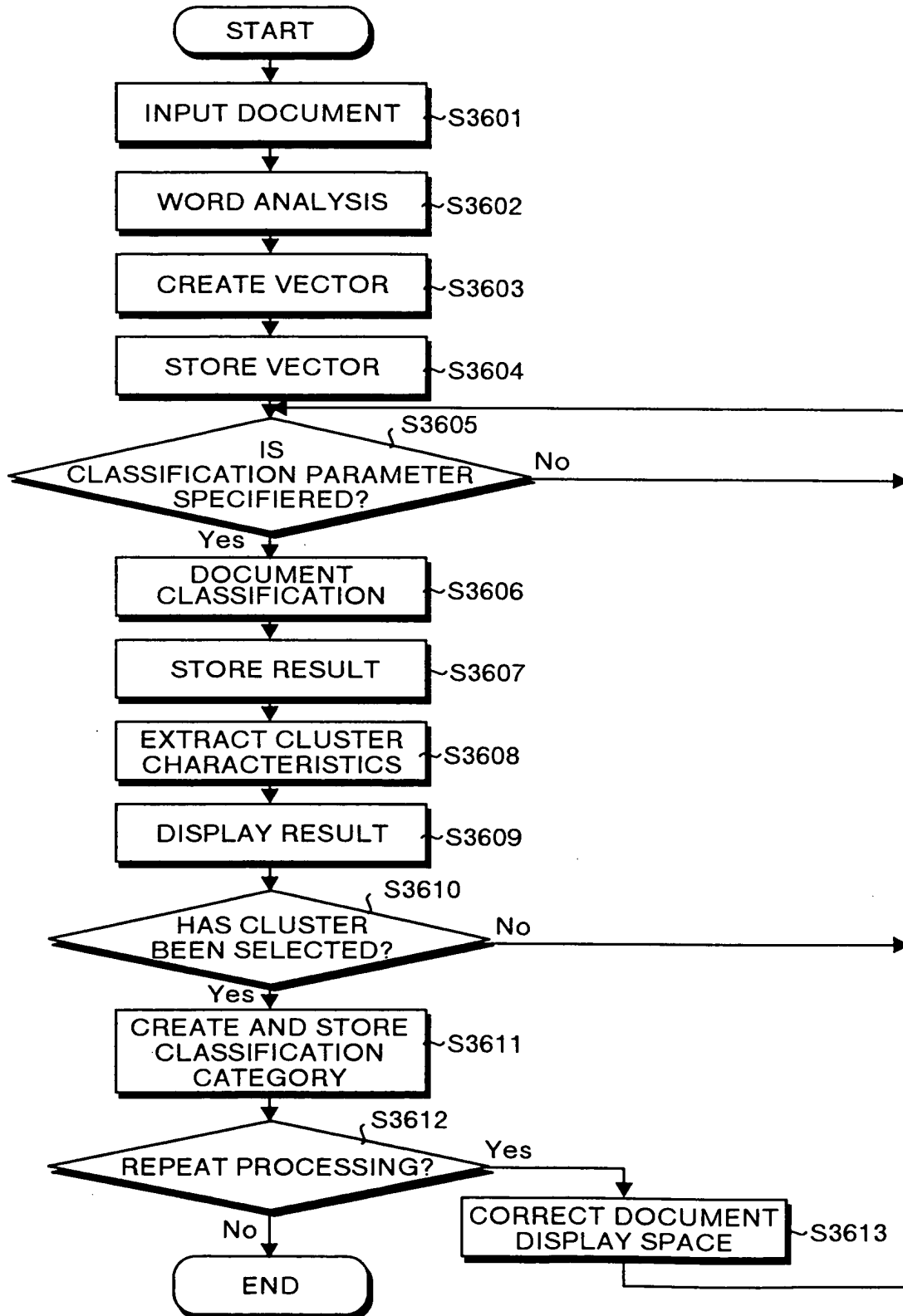
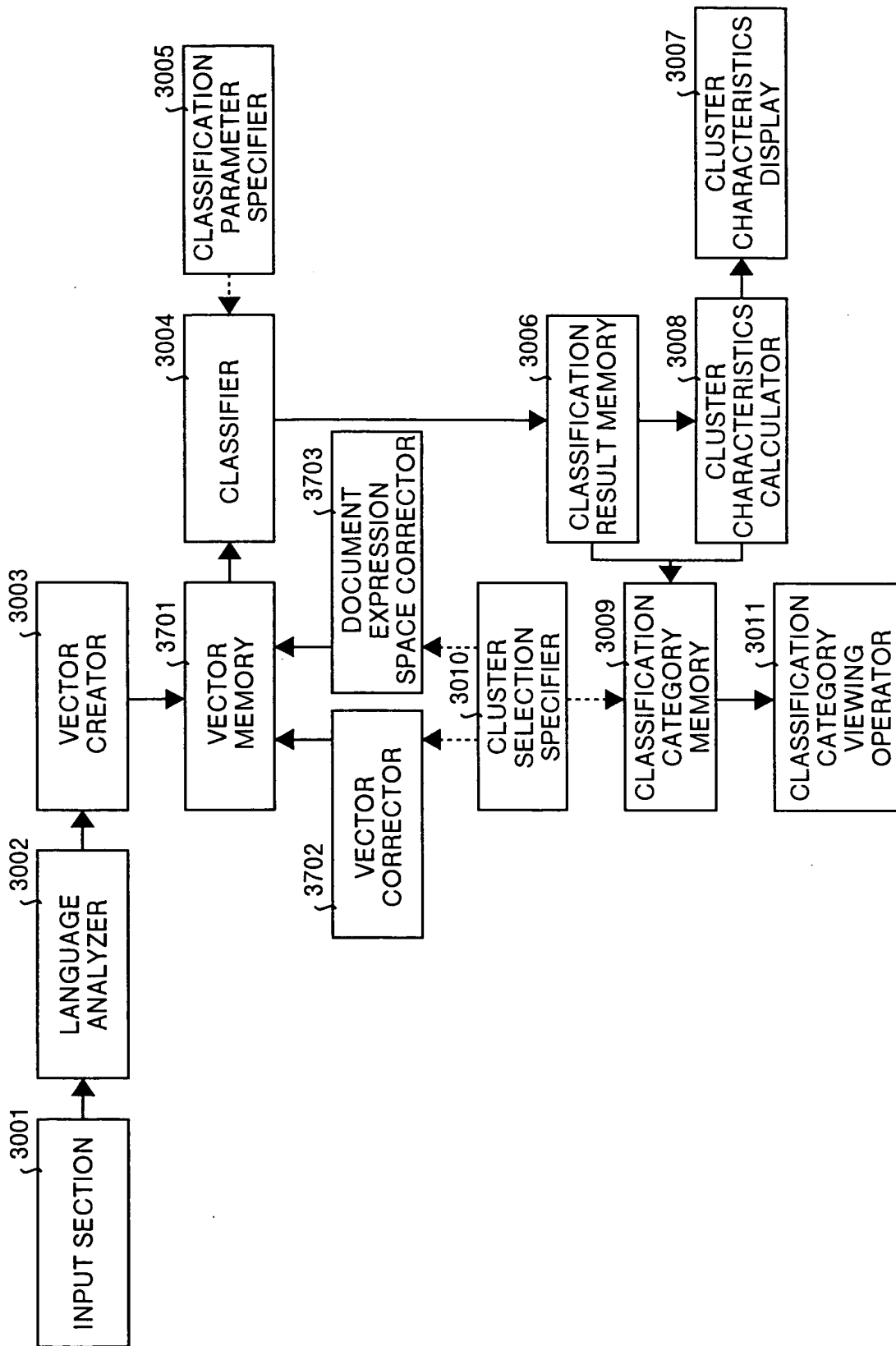


FIG. 37



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FIG.38

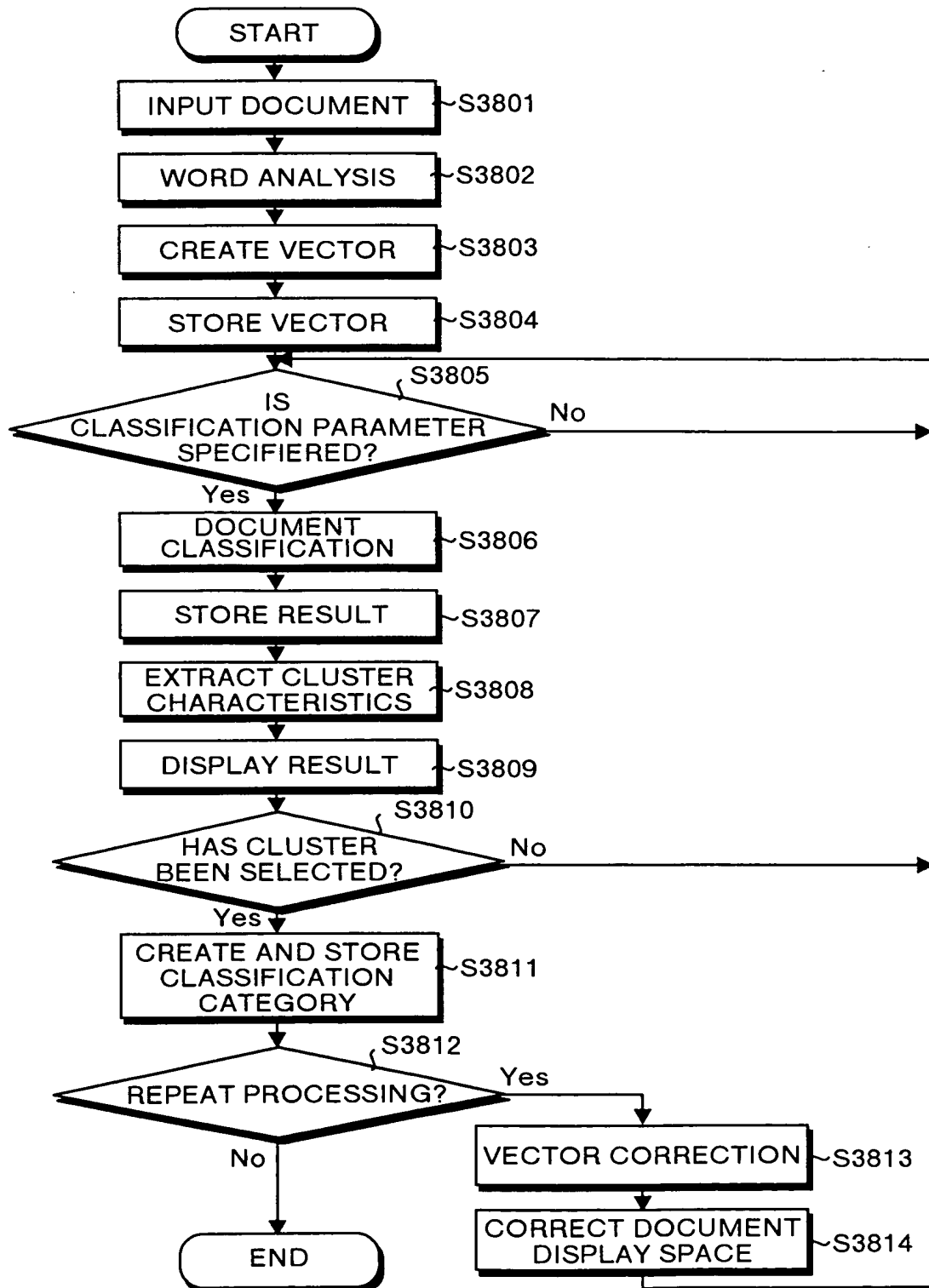


FIG.39

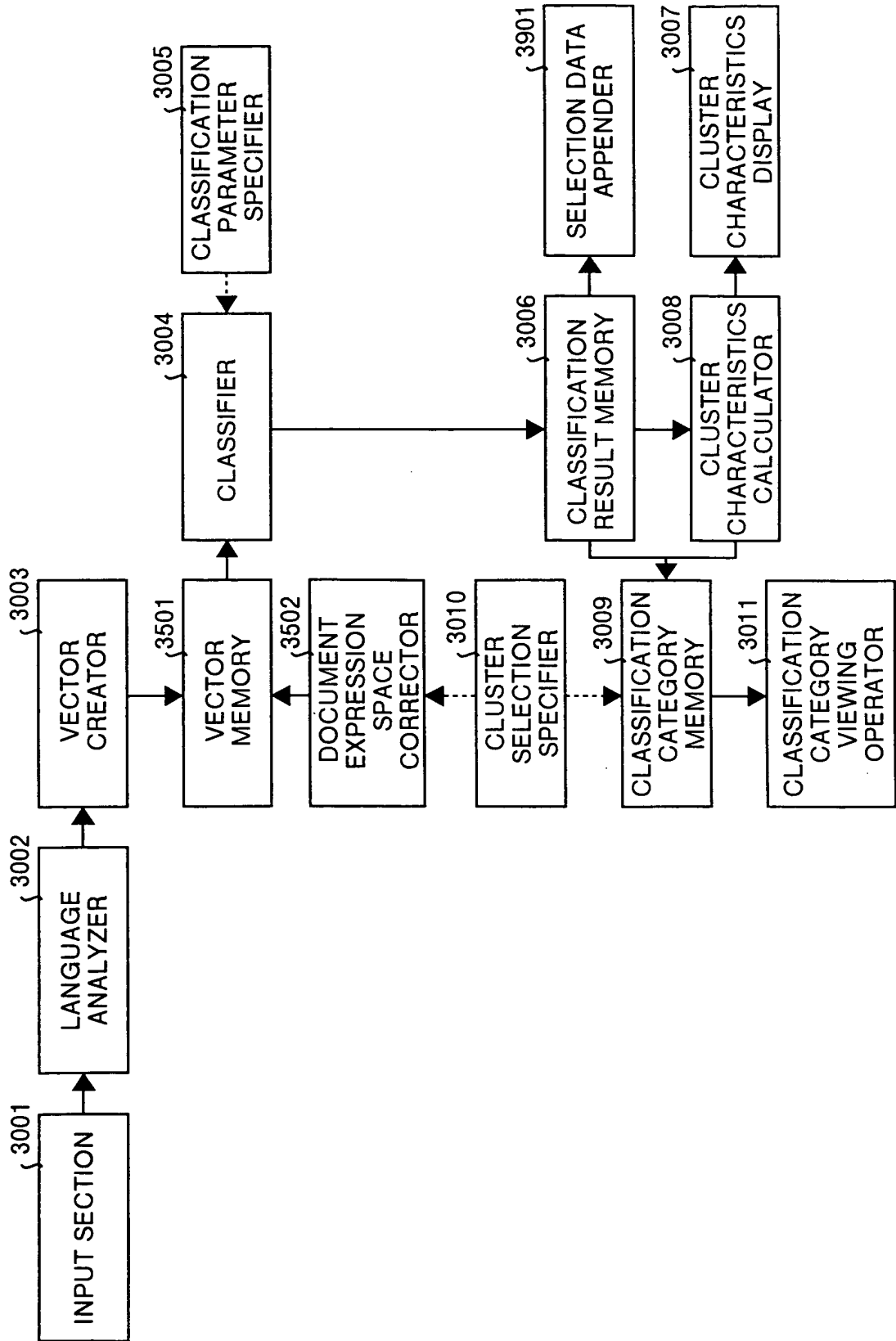
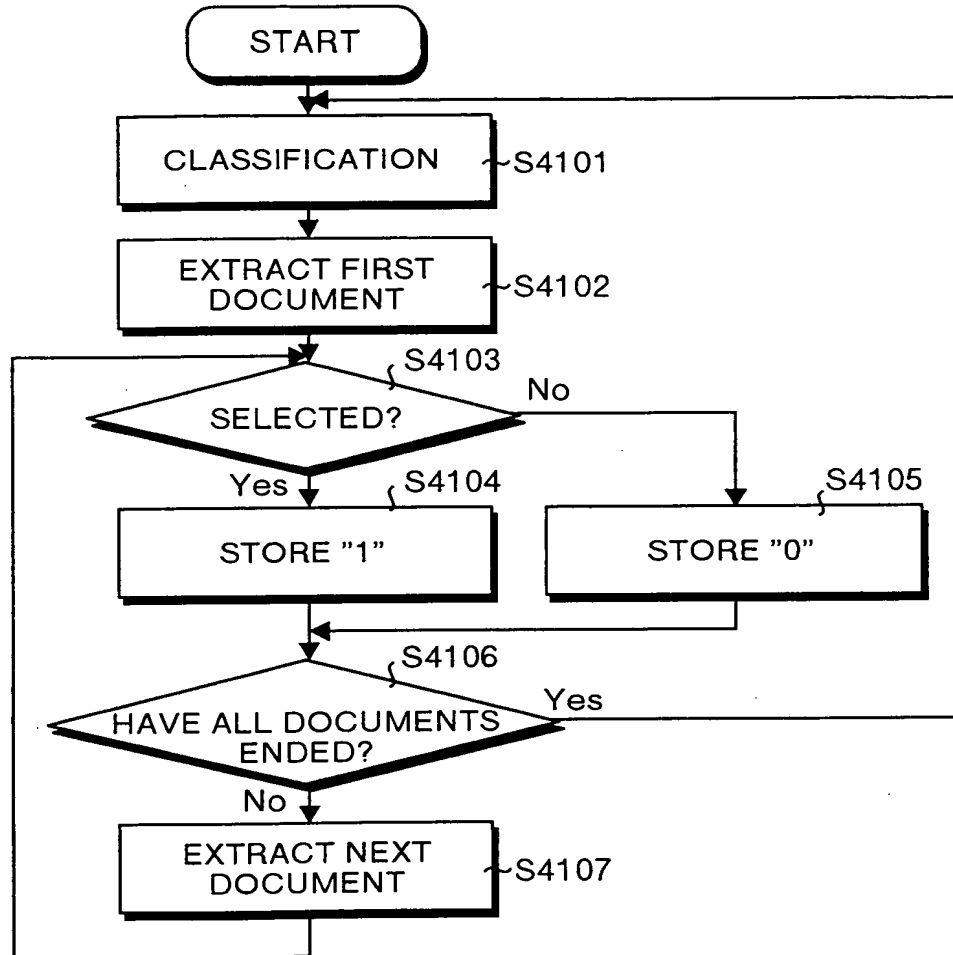


FIG.40

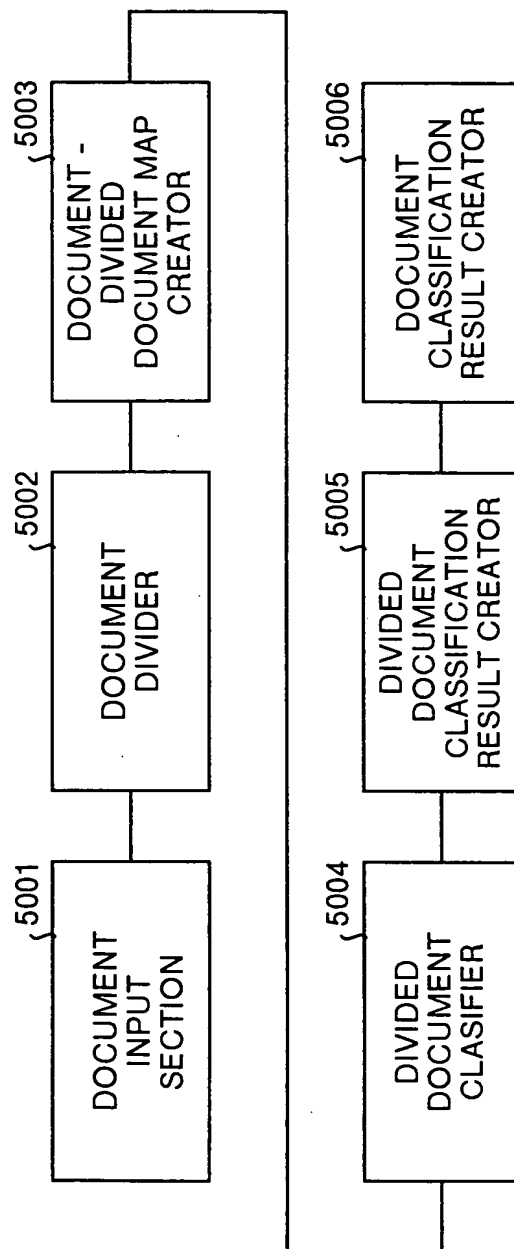
4000
↘

DOCUMENT ID	SEQUENCE OF CLASSIFICATIONS OF SELECTION DATA (1 =SELECTED / 0 = NOT SELECTED)
1	[1, 1, 0, 0]
2	[0, 0, 0, 0]
3	[0, 1, 0, 0]
⋮	⋮
n-1	[1, 0, 0, 0]
n	[0, 0, 0, 0]



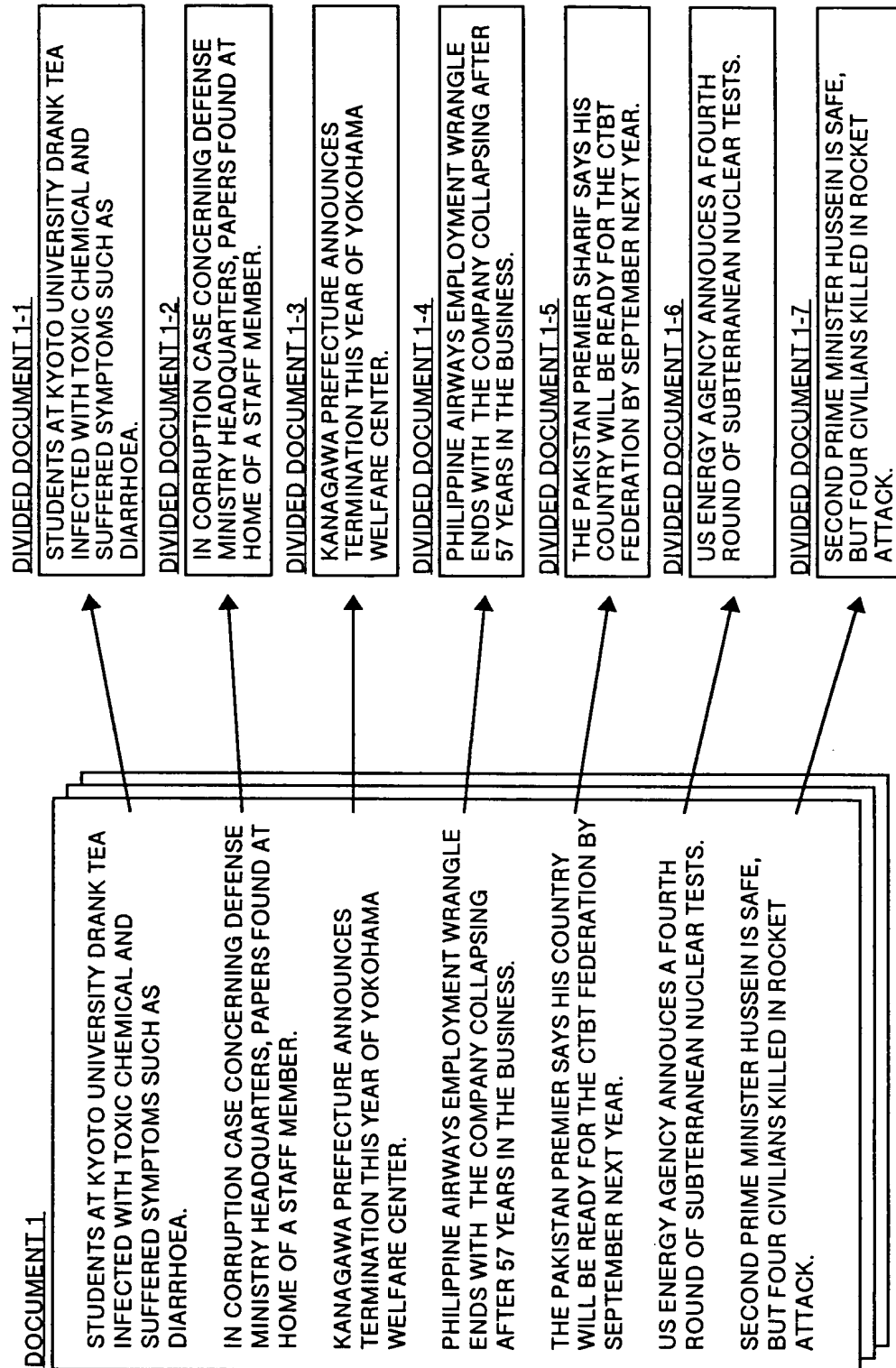
42/56

FIG. 42



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FIG.43



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FIG.44

IDENTIFICATION NUMBER
LOCATED IN DOCUMENT DATA

	DOCUMENT DATA IDENTIFICATION NUMBER
DOCUMENT 1	1
DOCUMENT 2	2
DOCUMENT 3	3

DIVIDED IDENTIFICATION NUMBER
LOCATED IN DOCUMENT DATA

		DIVIDED DOCUMENT DATA IDENTIFICATION NUMBER
DOCUMENT 1	DIVIDED DOCUMENT 1	1
	DIVIDED DOCUMENT 2	2
	DIVIDED DOCUMENT 3	3
	DIVIDED DOCUMENT 4	4
	DIVIDED DOCUMENT 5	5
DOCUMENT 2	DIVIDED DOCUMENT 6	6
	DIVIDED DOCUMENT 7	7
	DIVIDED DOCUMENT 8	8
DOCUMENT 3	DIVIDED DOCUMENT 9	9
	DIVIDED DOCUMENT 10	10
	DIVIDED DOCUMENT 11	11
	DIVIDED DOCUMENT 12	12

DOCUMENT DATA IDENTIFICATION NUMBER	DIVIDED DOCUMENT DATA IDENTIFICATION NUMBER
1	1
1	2
1	3
1	4
1	5
2	6
2	7
2	8
3	9
3	10
3	11
3	12

MAP OF DOCUMENT - DIVIDED
DOCUMENT ACCORDING TO ID
NUMBER

602227 602227 602227

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FIG.45

IDENTIFICATION NUMBER LOCATED IN DOCUMENT DATA

	DIVIDED DOCUMENT DATA IDENTIFICATION NUMBER	DIVIDED DOCUMENT DATA CHARACTERISTICS VECTOR
DIVIDED DOCUMENT 1	1	(1,1,1)
DIVIDED DOCUMENT 2	2	(5,5,5)
DIVIDED DOCUMENT 3	3	(3,2,4)
DIVIDED DOCUMENT 4	4	(3,2,3)
DIVIDED DOCUMENT 5	5	(5,4,6)
DIVIDED DOCUMENT 6	6	(1,2,1)
DIVIDED DOCUMENT 7	7	(1,0,1)
DIVIDED DOCUMENT 8	8	(5,4,5)
DIVIDED DOCUMENT 9	9	(2,2,4)
DIVIDED DOCUMENT 10	10	(2,1,1)
DIVIDED DOCUMENT 11	11	(4,4,6)
DIVIDED DOCUMENT 12	12	(5,5,6)

RESULT OF DIVIDING DIVIDED DOCUMENT DATA
INTO THREE CATEGORIES

DOCUMENT
CLASSIFICATION
(USING CLUSTER
ANALYSIS)

	DIVIDED DOCUMENT DATA IDENTIFICATION NUMBER	CLASSIFICATION CATEGORY	DISTANCE TO REPRESENTATIVE VALUE OF RELEVANT CATEGORY
DIVIDED DOCUMENT 1	1	CATEGORY 1	0.25
DIVIDED DOCUMENT 2	2	CATEGORY 3	0.87
DIVIDED DOCUMENT 3	3	CATEGORY 2	0.48
DIVIDED DOCUMENT 4	4	CATEGORY 2	0.74
DIVIDED DOCUMENT 5	5	CATEGORY 3	0.54
DIVIDED DOCUMENT 6	6	CATEGORY 1	1.03
DIVIDED DOCUMENT 7	7	CATEGORY 1	1.03
DIVIDED DOCUMENT 8	8	CATEGORY 3	0.70
DIVIDED DOCUMENT 9	9	CATEGORY 2	0.74
DIVIDED DOCUMENT 10	10	CATEGORY 1	0.75
DIVIDED DOCUMENT 11	11	CATEGORY 3	0.94
DIVIDED DOCUMENT 12	12	CATEGORY 3	0.83

DATA REPRESENTING CLASSIFICATION CATEGORY

	REPRESENTATIVE VALUE (CENTER OF RELEVANT DIVIDED DOCUMENT DATA)	NUMBER OF RELEVANT DATA
CATEGORY 1	(1.25, 1.00, 1.00)	4
CATEGORY 2	(2.66, 2.00, 3.66)	3
CATEGORY 3	(4.80, 4.00, 5.60)	5

DISTANCE BETWEEN CLASSIFICATION CATEGORIES

	CATEGORY 2	CATEGORY 3
CATEGORY 1	3.17	6.68
CATEGORY 2		3.69

FIG.46

DOCUMENT CLASSIFICATION RESULTS

CLASSIFICATION CATEGORY	DIVIDED DOCUMENT	DEGREE OF RESEMBLANCE	RELEVANT DOCUMENT	AREA OCCUPIED BY DOCUMENT	RELATIVE POSITION	RESEMBLANCE RANKING
CATEGORY 1	DOCUMENT 1	0.25	DOCUMENT 1	1/5	1/5	1
CATEGORY 1	DOCUMENT 6	1.03	DOCUMENT 2	2/3	1/3	3
CATEGORY 1	DOCUMENT 7	1.03	DOCUMENT 2	2/3	2/3	3
CATEGORY 1	DOCUMENT 10	0.75	DOCUMENT 3	1/4	2/4	2
CATEGORY 2	DOCUMENT 3	0.48	DOCUMENT 1	2/5	3/5	1
CATEGORY 2	DOCUMENT 4	0.74	DOCUMENT 2	2/5	4/5	2
CATEGORY 2	DOCUMENT 9	0.74	DOCUMENT 3	1/4	1/4	2
CATEGORY 3	DOCUMENT 2	0.87	DOCUMENT 1	2/5	2/5	4
CATEGORY 3	DOCUMENT 5	0.54	DOCUMENT 1	2/5	5/5	1
CATEGORY 3	DOCUMENT 8	0.70	DOCUMENT 2	1/3	3/3	2
CATEGORY 3	DOCUMENT 11	0.94	DOCUMENT 3	2/4	3/4	4
CATEGORY 3	DOCUMENT 12	0.83	DOCUMENT 3	2/4	4/4	3

FIG.47

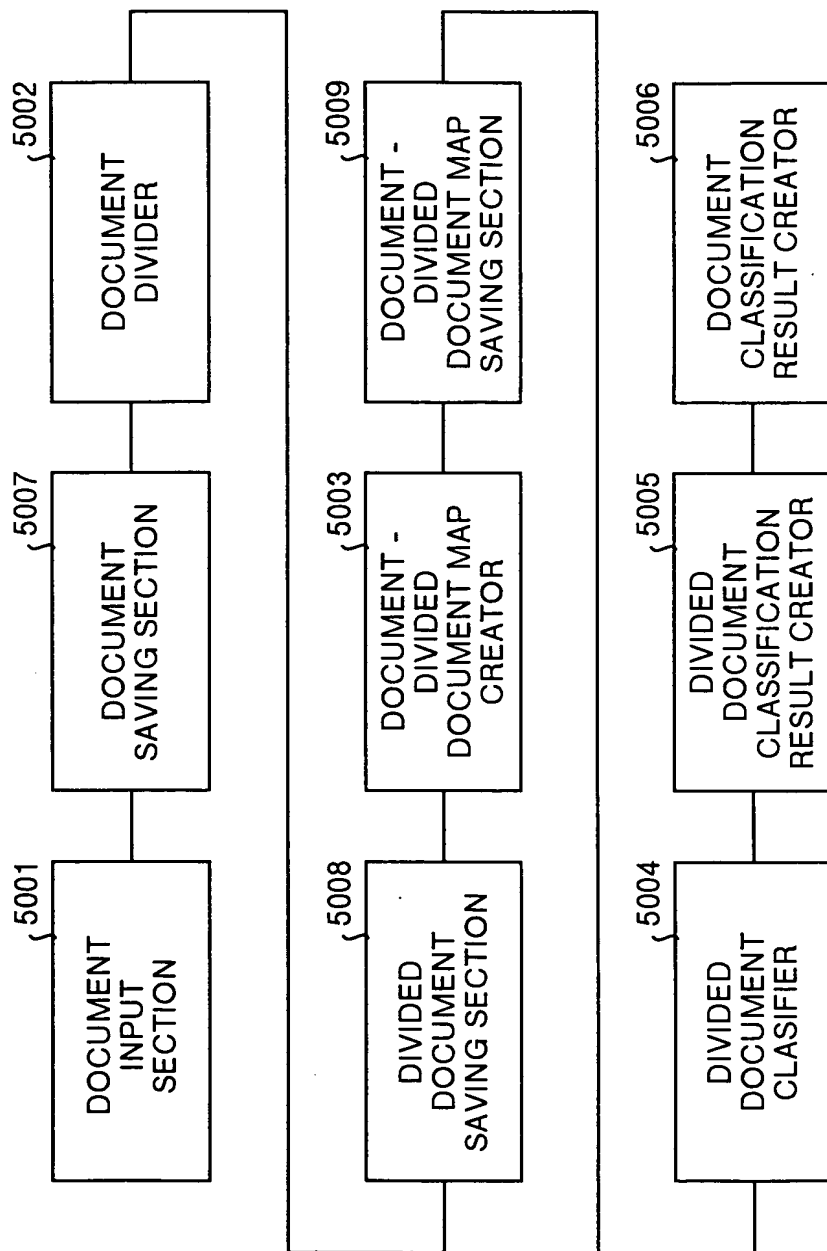
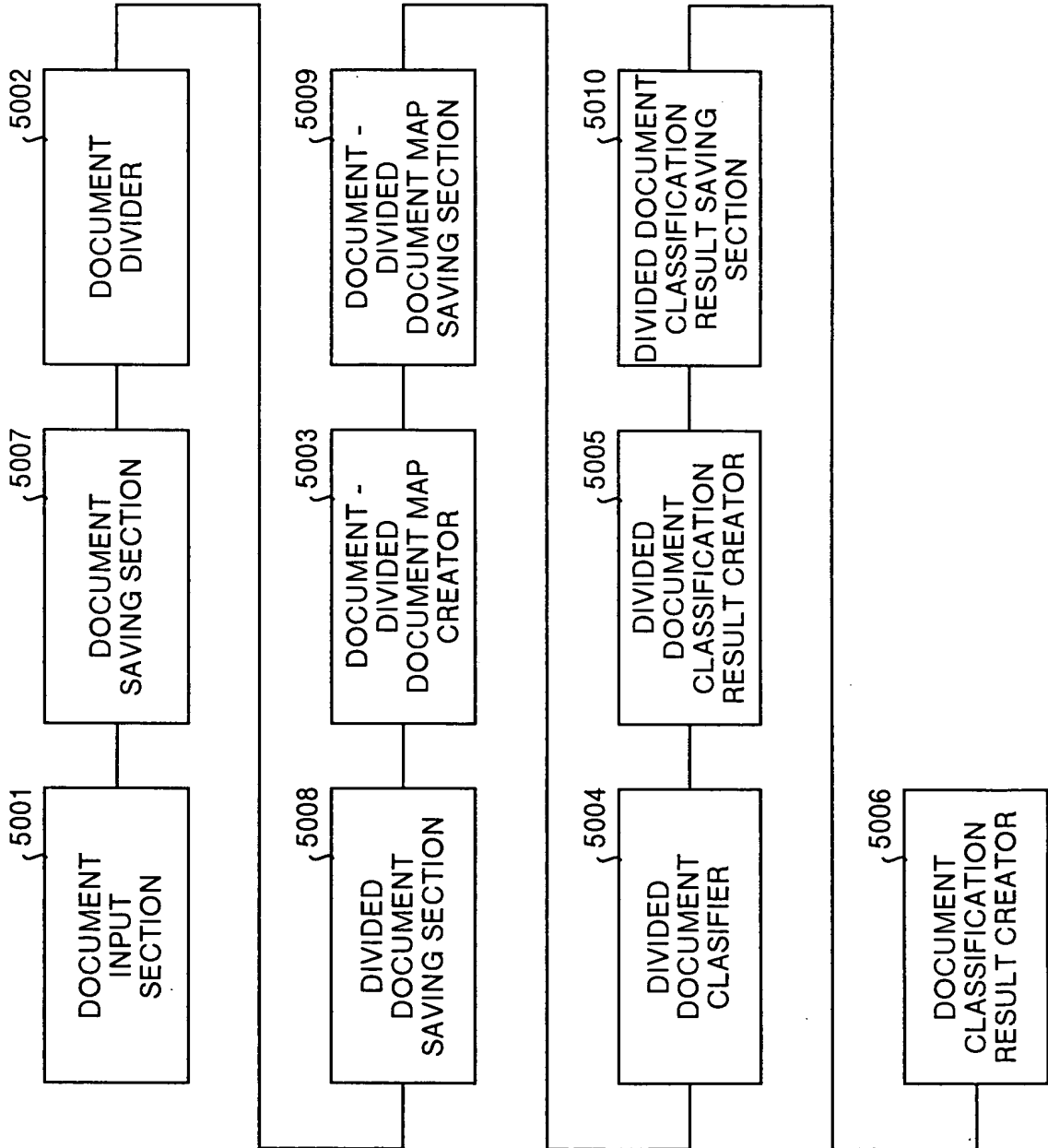


FIG. 48



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FIG.49

DOCUMENT 1

STUDENTS AT KYOTO UNIVERSITY DRANK TEA INFECTED WITH TOXIC CHEMICAL AND SUFFERED SYMPTOMS SUCH AS DIARRHOEA.

IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.

KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.

PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.

THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.

US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.

SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.

DIVIDED DOCUMENT 1-1

STUDENTS AT KYOTO UNIVERSITY DRANK TEA INFECTED WITH TOXIC CHEMICAL AND SUFFERED SYMPTOMS SUCH AS DIARRHOEA.

DIVIDED DOCUMENT 1-2

IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.

DIVIDED DOCUMENT 1-3

KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.

DIVIDED DOCUMENT 1-4

PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.

DIVIDED DOCUMENT 1-5

THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.

DIVIDED DOCUMENT 1-6

US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.

DIVIDED DOCUMENT 1-7

SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.

DIVIDED DOCUMENT 1-8

STUDENTS AT KYOTO UNIVERSITY DRANK TEA INFECTED WITH TOXIC CHEMICAL AND SUFFERED SYMPTOMS SUCH AS DIARRHOEA.

IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.

KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.

PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.

THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.

US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.

SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.

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FIG.50

DOCUMENT DATA

- STUDENTS AT KYOTO UNIVERSITY DRANK TEA INFECTED WITH TOXIC CHEMICAL AND SUFFERED SYMPTOMS SUCH AS DIARRHOEA.
- IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.
- KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.
- PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.
- THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.
- US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.
- SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.

HTML FORMAT

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    <LI>IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.</LI>
    <LI>KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.</LI>
    <LI>PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH&NBSP; THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.</LI>
    <LI>THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.</LI>
    <LI>US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.</LI>
    <LI>SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.</LI>
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DIVISION OF DOCUMENT DATA

|| CONVERT TEXT WITH TAG INTO ONE DIVIDED DOCUMENT DATA ||

DIVIDED DOCUMENT DATA

DIVIDED DOCUMENT 1

STUDENTS AT KYOTO UNIVERSITY DRANK TEA INFECTED WITH TOXIC CHEMICAL AND SUFFERED SYMPTOMS SUCH AS DIARRHOEA.

DIVIDED DOCUMENT 3

KANAGAWA PREFECTURE ANNOUNCES TERMINATION THIS YEAR OF YOKOHAMA WELFARE CENTER.

DIVIDED DOCUMENT 5

THE PAKISTAN PREMIER SHARIF SAYS HIS COUNTRY WILL BE READY FOR THE CTBT FEDERATION BY SEPTEMBER NEXT YEAR.

DIVIDED DOCUMENT 7

SECOND PRIME MINISTER HUSSEIN IS SAFE, BUT FOUR CIVILIANS KILLED IN ROCKET ATTACK.

DIVIDED DOCUMENT 2

IN CORRUPTION CASE CONCERNING DEFENSE MINISTRY HEADQUARTERS, PAPERS FOUND AT HOME OF A STAFF MEMBER.

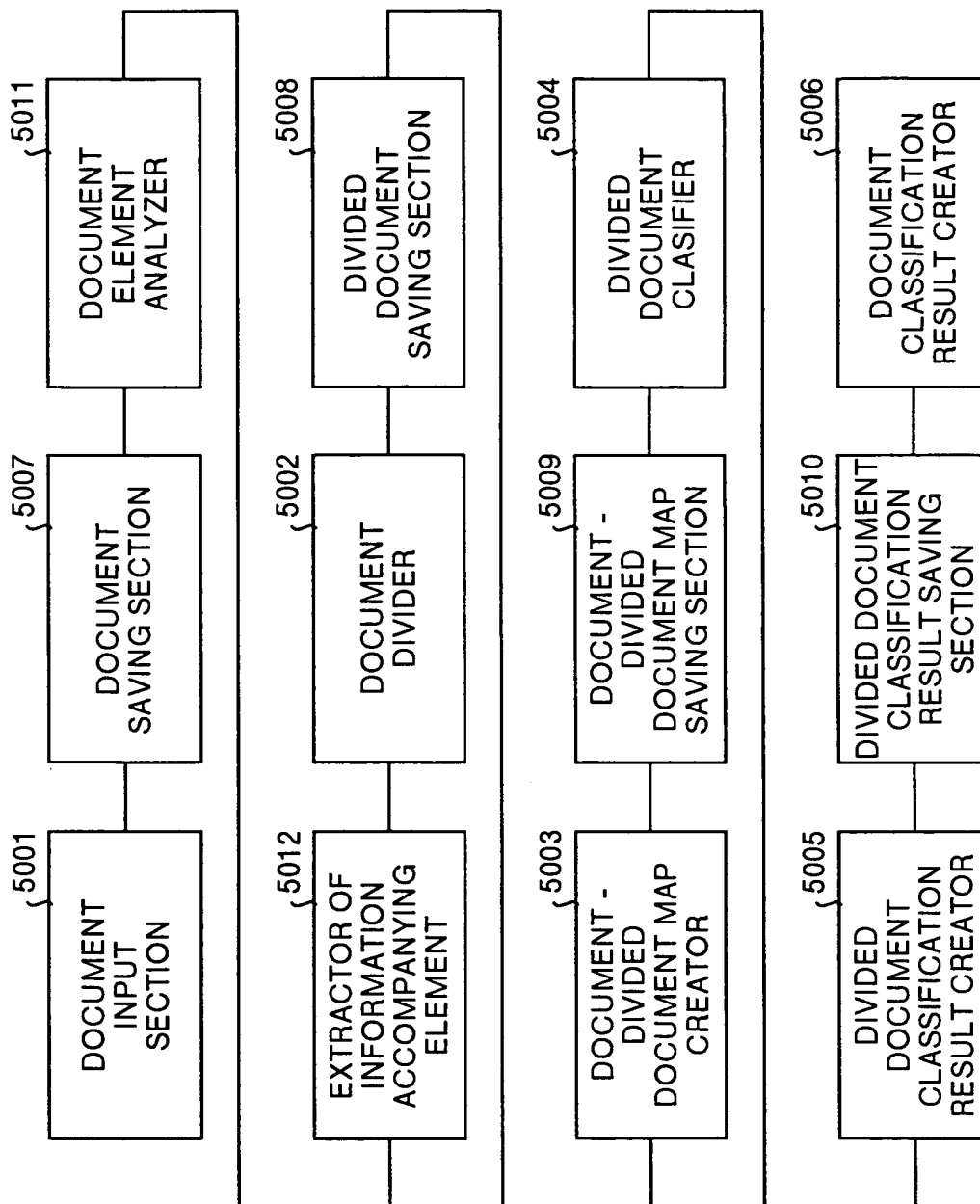
DIVIDED DOCUMENT 4

PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE ENDS WITH THE COMPANY COLLAPSING AFTER 57 YEARS IN THE BUSINESS.

DIVIDED DOCUMENT 6

US ENERGY AGENCY ANNOUNCES A FOURTH ROUND OF SUBTERRANEAN NUCLEAR TESTS.

FIG. 51



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FIG.52

DOCUMENT DATA

"TOPIC" + NUMBER + RETURN SYMBOL

NEWS TOPIC (98/10/25)

TOPIC1
STUDENTS AT KYOTO UNIVERSITY DRANK TEA
INFECTED WITH TOXIC CHEMICAL AND
SUFFERED SYMPTOMS SUCH AS
DIARRHOEA.

TOPIC2
IN CORRUPTION CASE CONCERNING
DEFENSE MINISTRY HEADQUARTERS, PAPERS
FOUND AT HOME OF A STAFF MEMBER.

TOPIC3
KANAGAWA PREFECTURE ANNOUNCES
TERMINATION THIS YEAR OF YOKOHAMA
WELFARE CENTER.

TOPIC4
PHILIPPINE AIRWAYS EMPLOYMENT
WRANGLE ENDS WITH THE COMPANY
COLLAPSING AFTER 57 YEARS IN THE
BUSINESS.

TOPIC5
THE PAKISTAN PREMIER SHARIF SAYS HIS
COUNTRY WILL BE READY FOR THE CTBT
FEDERATION BY SEPTEMBER NEXT YEAR.

DOCUMENT END SYMBOL

NATURAL LANGUAGE PROCESSING

EXTRACT NOUN ("TOPIC" AND NUMBER) AND RETURN SYMBOL

EXTRACT POSITIONS OF NOUN ("TOPIC" AND NUMBER) AND
RETURN SYMBOL WITHIN DOCUMENTDETECT POSITION OF LETTER ROW OF "TOPIC" + NUMBER +
RETURN SYMBOLDIVISION OF DOCUMENT DATA

WITH "TOPIC" + NUMBERS + RETURN SYMBOL AS THE HEADER,
DEEM A LETTER ROW COMPRISING "TOPIC" + NUMBERS +
RETURN SYMBOL, OR A LETTER ROW SURROUNDED BY A
DOCUMENT END SYMBOL, AS ONE DIVIDED DOCUMENT DATA

DIVIDED DOCUMENT DATA

DIVIDED DOCUMENT 1

STUDENTS AT KYOTO UNIVERSITY DRANK
TEA INFECTED WITH TOXIC CHEMICAL AND
SUFFERED SYMPTOMS SUCH AS
DIARRHOEA.

DIVIDED DOCUMENT 3

KANAGAWA PREFECTURE ANNOUNCES
TERMINATION THIS YEAR OF YOKOHAMA
WELFARE CENTER.

DIVIDED DOCUMENT 5

THE PAKISTAN PREMIER SHARIF SAYS HIS
COUNTRY WILL BE READY FOR THE CTBT
FEDERATION BY SEPTEMBER NEXT YEAR.

DIVIDED DOCUMENT 2

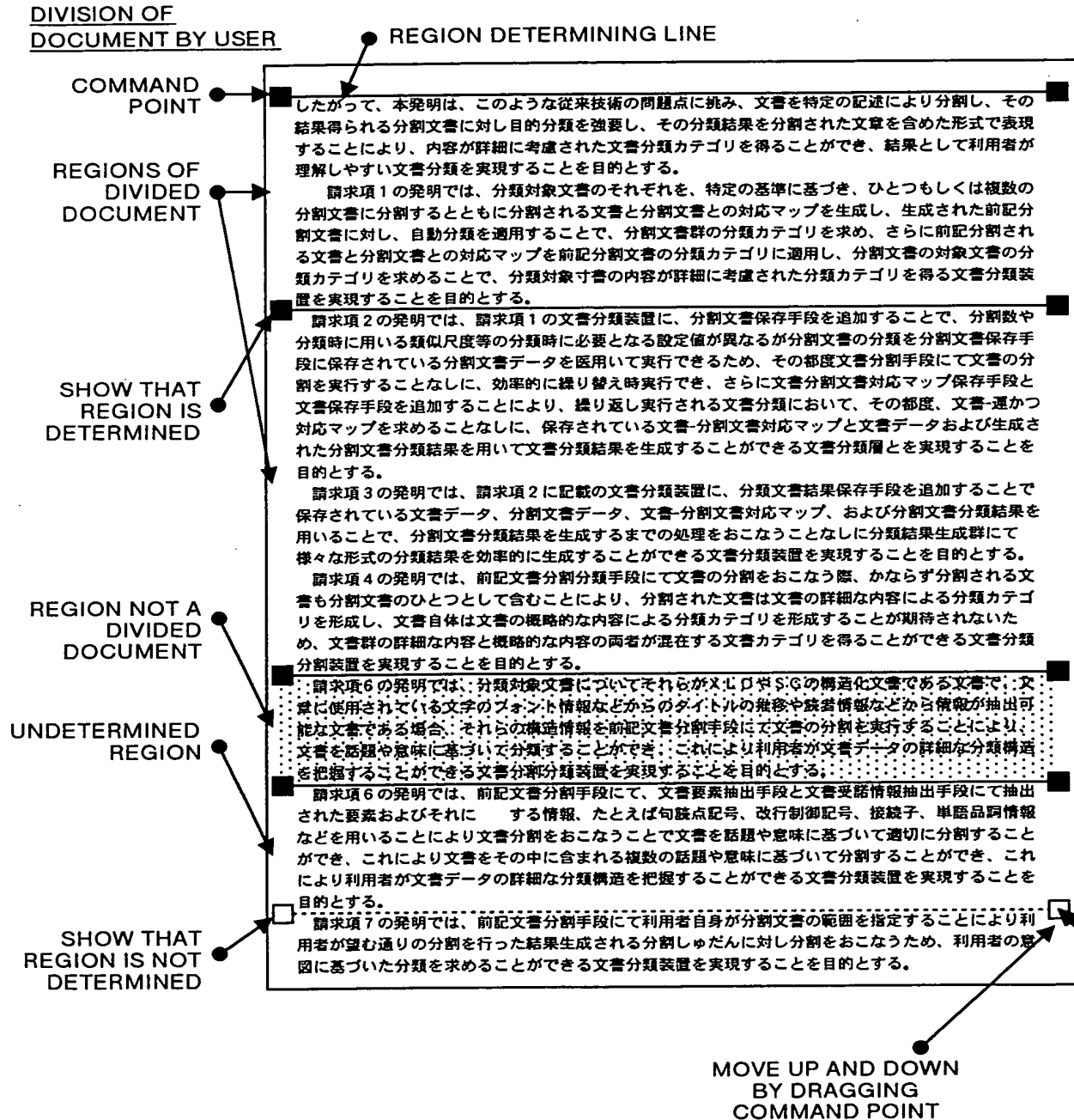
IN CORRUPTION CASE CONCERNING
DEFENSE MINISTRY HEADQUARTERS, PAPERS
FOUND AT HOME OF A STAFF MEMBER.

DIVIDED DOCUMENT 4

PHILIPPINE AIRWAYS EMPLOYMENT WRANGLE
ENDS WITH THE COMPANY COLLAPSING AFTER
57 YEARS IN THE BUSINESS.

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FIG.53



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FIG.54

DIVISION ACCORDING TO NUMBER OF
LETTERS AND NUMBER OF SENTENCES

DOCUMENT DATA

ユーザの意図を反映するような文書分類をおこなうためのひとつの方法とし、て前記表現空間変換関数により構成される空間における不必要な特徴次元や、悪影響を及ぼすような特徴次元に対し削除や合成をおこなったり逆にある特徴次元を強要させるための操作をすることが考えられる。しかし、前記表現空間変換関数により生成される空間の特徴次元は、前記文書群解析部にて抽出される単語のうち意味的に似たものが複数連合したものと考えられることができるため、各特徴次元の意味的な解釈はきわめて複雑かつ多義的なものであるため、ユーザに各特徴次元の意味を提示することはきわめて難しい。そこで、ユーザに分類させたくない内容や強要したい内容を持つ文章や単語などを指定させ、それらを前記表現空間変換関数により構成される空間に適切に射影し、それらと類似度の高い特徴次元や低い特徴次元を判別することで、操作をおこなう特徴次元を選択することが考えられる。ここでは、前記表現空間変換関数の特徴次元を操作する側として、ユーザが指定するある文書と類似度の高い特徴次元の削除をおこなう側を示す。ユーザにとり、指定された文書を前記文書特徴ベクトルと同じ次元を持つベクトルで表現し、その文書ベクトルに前記表現空間変換関数を適用し文書ベクトルを前記表現空間変換関数により構成される空間へ射影する。そして、この射影された文書ベクトルと各特徴次元との類似度を算出することで、類似度の高い特徴次元を判別する。このとき、類似度を測るための尺度としては、余弦尺度、内積尺度、ユークリッド距離尺度などを用いることができる。また、判別に関しては、ある類似度以上を削除対象として採用するような閾値処理による判別、類似度の高い層にある一定数を削除対象として採用する定数処理、もしくは判別分析なども用いることができる。このようにして、採用された特徴次元を前記表現空間変換関数から削除することで前記表現空間変換関数を修正することができる。

DIVISION OF DOCUMENT DATA

REGION FROM 200TH LETTER AFTER THE HEADER TO
THE NEAREST BREAK BEFORE OR AFTER IS DEEMED
A DIVIDED DOCUMENT

DIVIDED DOCUMENT 1

ユーザの意図を反映するような文書分類をおこなうためのひとつの方法とし、て前記表現空間変換関数により構成される空間における不必要な特徴次元や、悪影響を及ぼすような特徴次元に対し削除や合成をおこなったり逆にある特徴次元を強要させるための操作をすることが考えられる。しかし、前記表現空間変換関数により生成される空間の特徴次元は、前記文書群解析部にて抽出される単語のうち意味的に似たものが複数連合したものと考えられることができるため、各特徴次元の意味的な解釈はきわめて複雑かつ多義的なものであるため、ユーザに各特徴次元の意味を提示することはきわめて難しい。

DIVIDED DOCUMENT 2

そこで、ユーザに分類させたくない内容や強要したい内容を持つ文章や単語などを指定させ、それらを前記表現空間変換関数により構成される空間に適切に射影し、それらと類似度の高い特徴次元や低い特徴次元を判別することで、操作をおこなう特徴次元を選択することが考えられる。ここでは、前記表現空間変換関数の特徴次元を操作する側として、ユーザが指定するある文書と類似度の高い特徴次元の削除をおこなう側を示す

DIVIDED DOCUMENT 3

ユーザにとり、指定された文書を前記文書特徴ベクトルと同じ次元を持つベクトルで表現し、その文書ベクトルに前記表現空間変換関数を適用し文書ベクトルを前記表現空間変換関数により構成される空間へ射影する。そして、この射影された文書ベクトルと各特徴次元との類似度を算出することで、類似度の高い特徴次元を判別する。このとき、類似度を測るための尺度としては、余弦尺度、内積尺度、ユークリッド距離尺度などを用いることができる。

DIVIDED DOCUMENT 4

また、判別に関しては、ある類似度以上を削除対象として採用するような閾値処理による判別、類似度の高い層にある一定数を削除対象として採用する定数処理、もしくは判別分析なども用いることができる。このようにして、採用された特徴次元を前記表現空間変換関数から削除することで前記表現空間変換関数を修正することができる。

FIG.55

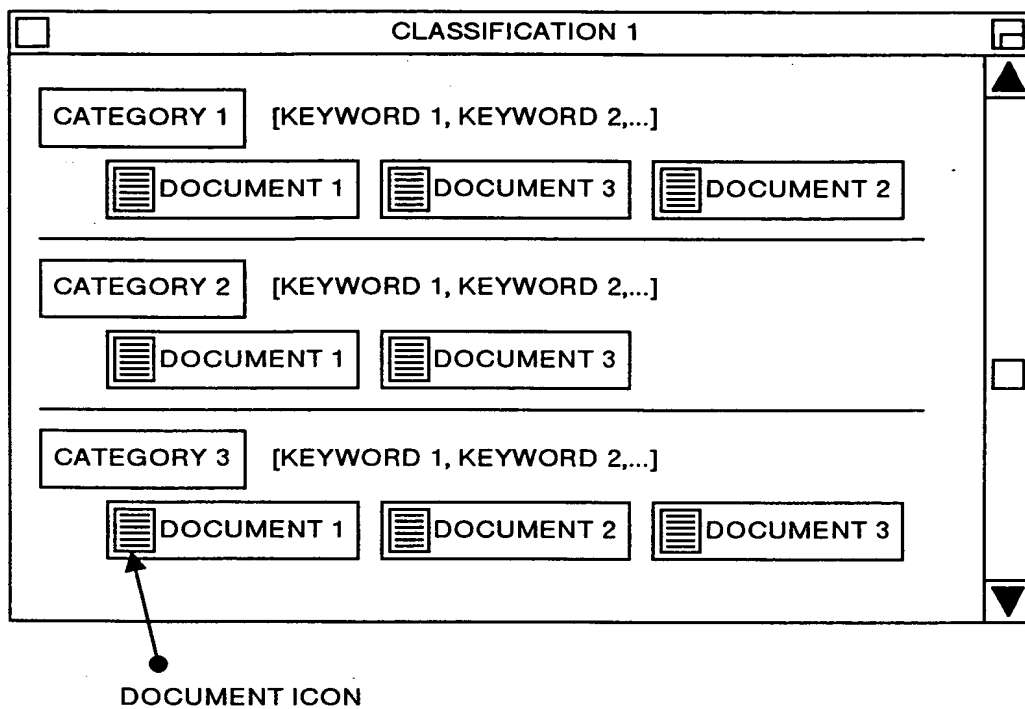


FIG.56

